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Published Quarterly

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AN APPLICATION OF SCALE ANALYSIS TO THE STUDY OF RELIGIOUS GROUPS*

by C. M. Coughenour†

ABSTRACT

When the formal aspects of scale analysis are applied to finite, rather than indefinite, universes of attributes, somewhat different criteria of scaling are found to be feasible. After some of these problems are discussed, the paper illustrates the successful application of scaling techniques to an area of non-attitudinal data, i.e., the sub-organizations of religious groups. Specifically, it is found that: (a) sub-organizations reported by a sample of local rural churches form a familiar cumulative scale; (b) church-type and sect-type groups differ significantly in the extent of sub-organizational development; (c) a significant relationship exists between the number of sub-organizations and the size of the group; and (d) the type of religious group is significantly associated with the degree of sub-organizational development, quite apart from the relationship between size of the group and the number of its sub-organizations.

The application of scale analysis to the study of attitudes is already well developed,¹ and a considerable bibliography of articles is now available presenting various applications of the technique in this field. However, application to the measurement of other types of qualitative data has spread

more slowly. As a result, we are not yet fully realizing in our research work all the benefits which may come from the use of this technique. A significant step in this direction was made by Shapiro, who indicated that the technique could be used successfully to scale institutionalized data on the forms of segregation existing in several states.² More recently others have used scaling techniques to analyze socioeconomic status,³ neighborliness,⁴ institutionalized services provided by villages and towns,⁵ adoption of home-making practices,⁶ and certain aspects of role behavior.⁷ It is the purpose of

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†University of Missouri, Columbia, Mo.

¹The primary source on scaling, of course, continues to be Samuel A. Stouffer *et al.*, *Studies in Social Psychology in World War II*, Vol. IV: *Measurement and Prediction* (Princeton, N. J.: Princeton University Press, 1949).

Recently, in several articles and parts of books, Louis Guttman has developed several new and more general approaches to scaling theory. Cf. Louis Guttman, "Image Analysis for the Structure of Quantitative Variates," *Psychometrika*, XVIII (1953), pp. 277-296; Guttman, "The Principal Components of Scalable Attitudes" and "A New Approach to Factor Analysis: The Radex," in Paul F. Lazarsfeld (ed.), *Mathematical Thinking in the Social Sciences* (Glencoe, Ill.: The Free Press, 1954); and Matilda W. Riley, John W. Riley, Jr., and Jackson Toby, *Sociological Studies in Scale Analysis* (New Brunswick, N. J.: Rutgers University Press, 1954).

²Gilbert Shapiro, "Myrdal's Definitions of the 'South': A Methodological Note," *American Sociological Review*, XIII (1948), pp. 619-621.

³Mary J. Harris, *Review of Methods of Scale and Item Analysis*, North Carolina State College AES Bull., Progress Report Rs-13 (Raleigh, 1950).

⁴Paul Wallin, "A Guttman Scale for Measuring Women's Neighborliness," *American Journal of Sociology*, LIX (1953), pp. 243-246.

⁵Edward Hassinger, doctoral dissertation in preparation at the University of Minnesota.

⁶Helen C. Abell, "The Use of Scale Analysis in a Study of the Differential Adoption of Homemaking Practices," *Rural Sociology*, XVII:2 (1952), pp. 161-167.

⁷Riley, Riley, and Toby, *op. cit.*

this paper to present another illustration of the application of scale analysis to non-attitudinal data, specifically to the study of organizations or groups. The exposition of this illustration may be organized in response to two general problems: One is a practical problem involved in applying the technique to this area of qualitative data. The second problem concerns the generalization of the utility of scaling to the study of organizations.

ASSUMPTIONS AND CRITERIA OF SCALE ANALYSIS⁸

In its development as applied to the scaling of attitudinal data, one of the major assumptions of the Guttman scaling technique is that the items being scaled are but a sample of an indefinite universe of similar items or attributes, and that the scalability or non-scalability of the sample of attributes enables the researcher to make certain inferences about the entire universe.⁹ One of the consequences of this assumption is that the criteria—of a scale of the sample of items—be so rigorously defined that it is possible to infer reliably the scalability of the entire universe of attributes. Thus, in order for the scalability of a universe of attributes to be inferred from a sample of it, several minimum criteria must be met: (1) not less than 90 per cent of the responses to all the items must be reproducible from the scale scores alone; (2) the reproducibility of

individual items must not be much below 90 per cent; (3) no item category should have more error than non-error in it; (4) as many as ten or more items should be included in the sample, preferably with more than two categories in some of the items; (5) the range of marginal frequencies should be large; and (6) the scale error should be random.

These criteria are designed to serve two main functions: First, they are the basis for determining whether the multivariate frequency distribution of the responses to a sample of items can be described as a simple function of a single quantitative variable¹⁰—i.e., does the sample of items constitute a single dimension? This is determined primarily by the reproducibility of the sample of items, the presence of less error than non-error in any item category, and the pattern of errors—but to some extent by all of the criteria. Second, the remaining criteria are primarily designed to prevent the occurrence of a spuriously high reproducibility in the sample of items and consequently an erroneous assumption of scalability of the sample and of the universe of attributes. As is well known, these criteria do not enable the researcher to adduce that a universe of attributes exists or that the items all come from a single universe. Whether a universe of content exists as well as whether the specific items all come from a single universe is entirely dependent upon the considered judgment of the researcher. However, when such a judgment has been made, then the scalability of the set of items enables the researcher to make similar inferences about the assumed universe of attributes.

APPLICATION TO FINITE UNIVERSES

As has been observed by Suchman¹¹ and as successfully demonstrated by

⁸ The author is especially indebted to Cecil L. Gregory for his many helpful suggestions with regard to the methodological questions discussed in the following pages.

⁹ See Stouffer et al., *op. cit.*, pp. 51-53, 80 ff., 277, and 286 ff. The following statement by Louis Guttman (p. 81) perhaps states the position as well as any: "Scalogram theory shows that if the universe contains but a single variable, that is, if all questions have but a single content ordering, then the same rank order of the individuals upon this content will be obtained regardless of which sample of questions is selected from the universe."

¹⁰ *Ibid.*, p. 64.

¹¹ *Ibid.*, p. 157.

several others, scale analysis is formal and may be applied in a variety of situations where one may expect to find attributes which possess the familiar cumulative property. In view of this consideration, scaling technique was used in the present study to analyze certain attributes of religious groups, e.g., the sub-organizations. However, in applying scaling technique to the study of groups, one is frequently faced with the necessity of scaling what appears to be an entire finite universe of items rather than a sample from an indefinite universe. That is, the items being scaled are all the items that exist on this particular level of generality. This difference in a basic assumption of the problem to which scaling is applied raises immediate questions regarding the minimum criteria which must be met in order that the advantages associated with the determination of scalability may be retained.¹²

In those instances in which all of the items on a particular level of generality are included in the scale, obviously one is no longer concerned with making judgments or inferences of the scalability of an assumed indefinite universe of attributes of which the given set of items is a sample, but only with the set of items being scaled. This being so, one of the reasons for concern with the possibility of spuriously high reproducibility, due to high modal frequencies in some of the items or a limited number of items, is eliminated. Obviously, if all of the items in the universe are being tested for scalability, we can not have fortuitously selected items which are scalable while

other omitted items are not scalable. In this sense, the pattern of responses—of individuals to items—is real. (Unless all individuals are surveyed, however, sampling error of individuals may be a factor.) The mechanics of scaling will enable one to determine the pattern of responses which exists, insofar as the responses may be represented by a simple quantitative variable. Items with high marginal frequencies in the modal category presumably would be acceptably reproducible; other items not so proportioned might be individually reproducible all the way from the percentage existing in the modal category to 100 per cent. The existence of individual items (with less than a 90-per cent frequency in the modal category) which are not reproducible above 90 per cent may or may not be acceptable, depending upon the particular research problem. Certainly they could not be considered as belonging in the same qualitative dimension with the other content items, nor within the usual definition would such a set constitute a scale.

However, besides the fact that a scalable sample of items permits the investigator to make a similar assumption about the entire universe of content, there are additional mathematical and conceptual advantages that are of greater importance. These advantages in description, interpretation, and prediction¹³ are equally dependent upon the hypothesis of acceptable approximate perfection of the scale pattern. Consequently, even when dealing with a finite universe of content, the question of reproducibility stands foremost. Except for the fact that the possibility of fortuitous selection of items or the number of items is not important, the difficulties are the same as before.

With a small number of items, and particularly with some items included

¹² The problem of finite as well as infinite universes, the author is informed, will be treated directly, at least in part, by the new theory of image analysis. The first of a series of papers on this subject have now appeared. See L. Guttman, "Image Analysis for the Structure of Quantitative Variables," *op. cit.*, and Guttman, "The Israel Alpha Technique for Scale Analysis," in Riley, Riley, and Toby, *op. cit.*

¹³ Cf. Stouffer *et al.*, *op. cit.*, chap. 5.

which have marginal frequencies above 90 per cent in the modal category, the usual method of computing reproducibility is inadequate, for two related reasons: First, since items with a high modal frequency—so far as the objective criteria of scaling are concerned—always belong with any set of items, one must be primarily concerned with the scalability of items which do not have such high marginal frequencies. Consider a dichotomous item with a marginal frequency in the modal category approaching 100. In this example, only the responses in the nonmodal category can be errors; reproducibility of the item automatically will be above the acceptable margin and the item will appear to belong in the same dimension. Several items of this sort in any finite universe of attributes may well increase the reproducibility of a small set above the acceptable margin. But it should be recognized that it is not the pattern of responses in the high modal frequency items which is directly the problem, but rather that the possibility of error in such items is so low that they may cover up for items which individually may not be reproducible in the same dimension. As a result one must be concerned with the individual item reproducibilities, particularly of those which do not have high marginal frequencies, in order to determine whether they belong in the same dimension.

A way of determining individual item reproducibility after the items have been scaled is merely to count the number of errors in the separate categories of the item, divide by the number of individuals responding to the item, and subtract the dividend from unity. Yet for a second reason the usual method of obtaining a measure of reproducibility is not satisfactory for individual items because, when the number of items is small, the reproducibility of the item will be biased upward owing to the fact that the item is

being compared with a score of which it is a part. An alternative method of computing the reproducibility, called the part-score method, eliminates this problem. It involves holding out each item, in turn, from the analysis, while scaling the remaining items. This operation produces a number of sets of trial scale scores equal to the number of items being scaled. The number of errors for each item can then be counted by comparing the responses on the items with the ranking of scores of respondents obtained when scaling the remaining items. The reproducibility of the set of items as a scale is merely the mean of the individual item reproducibilities.¹⁴

If the individual items do not meet the minimum criteria of reproducibility, pattern of error, etc., the researcher faces two alternatives: One, that of dropping the notion of scaling and proceeding to analyze the data by other techniques; or two, if the particular research problem permits, of dropping the item which does not scale and

¹⁴ This method of correcting for spurious reproducibility arising from the use of a set of items in which some have high marginal frequencies was suggested to the writer by Louis Guttman in a personal communication. A brief discussion of this method of computing reproducibility can be found in L. Guttman, "On Festinger's Evaluation of Scale Analysis," *Psychological Bulletin*, XLIV (1947), p. 453.

After this paper had been written, the writer became familiar with a somewhat different approach to the problem of scalability and a new coefficient of scalability developed by Herbert Menzel. [Cf. "A New Coefficient for Scalogram Analysis," *Public Opinion Quarterly*, XVII (1953), pp. 268-280.] When used with respect to the scaling of a small set of items, the approach is more straightforward and has the effect of discounting the spurious effect of extreme items. Thus, the coefficient of scalability eventually may be the better solution to the problem; but it has the difficulty at present that an empirical standard of acceptable scalability, corresponding to the 90-per-cent criterion of reproducibility, has not been established.

treating the remaining items as if they constituted a scalable finite universe. Meanwhile, the relationships of the non-scale item in the particular problem perhaps can be analyzed separately. In the latter case, of course, the researcher would not be justified in making any inferences of scalability concerning the totality of attributes from the set which has been found by the formal criteria of scales to constitute a single dimension. However, one would be able to use the scalable set of items to predict an outside criterion, which may be all that is required.

One important consideration which was passed over very rapidly in the above discussion merits more attention. The minimum criterion of item reproducibility and the acceptable proportion of error in any item category ordinarily enable us to distinguish between those items which belong in the scale and those which do not. However, as has been at least implied, these criteria break down for those items which have high marginal frequencies in the modal category above the level of the minimum criterion, which is normally 90 per cent. So far as one may judge from the criteria, such items always belong with any set of items being tested because they will always be reproducible above the minimum level. Only the criterion that no item category shall have more error than non-error in it provides an objective basis for making a judgment as to whether the item really belongs with the remaining set of scalable items as a part of a single dimension. In this sense, the objective criteria provide no basis for testing the scalability of items with high marginal frequencies in one category.

How then are we to handle such items? In the study of attitudes or opinions where all that may be required is the division of the population into two, three, or four broad groups distinguished by differences in degree

of attitude toward the particular issue, such items ordinarily will be dropped because they are useful only in distinguishing segments of the population on the extreme ends of the attitude or opinion continuum. However, in the situation where the researcher may be particularly interested in the persons or groups that fall at the extremes, one is faced with making a decision either to include the item—despite the absence of objective test—or to abandon the use of scaling technique in the particular problem.

In time, adequate objective criteria perhaps may be developed for evaluating an item which has a high marginal frequency in its modal category and is thus automatically reproducible in the same dimension with any set of items.¹⁵ Such an item, of course, should also meet the tests of minimum error in any item category and randomness of error. Meanwhile, items which meet the foregoing conditions may be judged as belonging to the same dimension as the other scalable items on the basis of the same logic by which they were first included in the set. In other words, in scaling as in many other statistical techniques, the first step is logical and rational thought. One must decide rationally that there is a universe of some kind concerning which one may deduce a set of items which are attributes of this universe. When the decision that certain items belong in a particular universe has been made, scaling technique enables one to determine whether they constitute a single qualitative dimension that can be represented by a single quantitative variable. Any item that meets both the logical and formal conditions may be adjudged to belong in the dimension of the particular universe of attributes being scaled. This would seem to apply

¹⁵ At least a partial test of the items is available if the coefficient of scalability (cf. footnote 14) is used.

to any item irrespective of its marginal distribution.

It is reasonable to suppose that one or more items of this kind might be included at either end of the scale. In fact, within the limits of the situation as described, it is hypothetically possible—although undoubtedly not practicable—for all of the items to be of this type. In any case, this approach to the treatment of a limited number of items, some of which may have high marginal frequencies in the modal category, is justified only where it is assumed or judged that one is scaling a finite universe of items or where the researcher treats the set of items as if they constituted a finite universe. In the former case, no inferences concerning an indefinite universe of attributes are necessary by definition; and in the latter, any inferences which might be made would be fallacious.

A SCALE FOR RELIGIOUS GROUPS

For several years, a study of religious groups in rural Missouri has been in progress.¹⁶ In one phase of the study, a sample of 505 local rural churches located in different parts of the state were surveyed. In an institutional analysis of these local church groups, one step has been the delimitation of the number and variety of sub-organizations. From this basic information, several questions can be answered concerning the functioning of religious groups. It is here that some additional insight, as well as considerable efficiency in handling the data, can be gained by the use of scaling techniques.

While the following questions are cast in terms of the specific study of religious groups, they have an application to the study of organizations in

general. The knowledge that a given set of items relating to religious sub-organizations will scale provides significant information with respect to two different questions: First, what is the rank order of the religious groups expressed as a function of the sub-organizations? Second, what is the order of the relative importance of the items or sub-organizations? Or, what is the relative frequency of occurrence of various sub-organizations in the religious groups? At the same time, once a scale has been established, the scores may be used in examining relationships between the presence of different sub-organizations and other aspects of religious groups, such as the size of the group, training of ministers, and the like. Associations of this type are readily determined by computing the simple correlation between the sub-organizational scale scores of the religious groups and the scores on any other variable.

By using the Cornell technique,¹⁷ the presence or absence of the sub-organizations—Sunday School, women's organization, organized choir, youth organization, men's club, young adult organization, and older adult organization—was tested for scalability. Of the total number of sub-organizations found in the 505 local religious groups, 91.2 per cent fall into these seven types. The remaining sub-organizations do not scale as individual sub-groups and are difficult to classify into meaningful types which might scale. Consequently, in view of the large proportion of the total number of sub-organizations included in the seven major types of religious sub-organizations and the unsystematic nature of the other sub-organizations not included, it seems reasonable to assume that we are essentially dealing with a finite

¹⁶ This is an Agricultural Experiment Station project, under the direction of the Department of Rural Sociology, University of Missouri. It is financed by a grant from the Rockefeller Foundation.

¹⁷ L. Guttman, "The Cornell Technique for Scale and Intensity Analysis," *Educational and Psychological Measurement*, VII (Summer, 1947), pp. 247-280.

universe of sub-organizations. If this is maintained, then the criteria for scalability must be in terms of the considerations set forth in the previous section.

Reproducibility of the items, therefore, must be determined as a mean of the individual item reproducibilities figured by the part-score method.¹⁸ The reproducibilities of the individual items are: Sunday School, 0.92; women's organization, 0.95; organized choir, 0.83; youth organization, 0.92; men's club, 0.96; young adult organization, 0.96; and older adult organization, 0.99. The mean reproducibility of the seven individual item reproducibilities is 0.94, well above the level acceptable for scalability. The error is random in each item category, and no item category has more error than non-error in it.

Of the seven items, the only one with a questionably low reproducibility is organized choir (0.83). Ordinarily an item with this low a coefficient of reproducibility should be dropped. However, for several reasons, it is kept in the scale: First, the frequency of the response in the modal category is 63 per cent, thus providing a cutting point near the center of the distribution. Secondly, an organized choir is an important sub-organization in religious groups, and to omit it would seriously reduce the generality of the scale. Finally, from the field reports of the interviewers, it appears that greater difficulty was incurred in recording this item than in any other. In the case of scalable universes, such as this seems to be, it is error (of which this kind of error is a part) which produces less than 100-per-cent reproducibility. Consequently, we may assume that greater accuracy in the reporting of an organized choir in churches would increase the reproducibility of this item.

¹⁸ Refer to the earlier discussion of this method.

Since the sub-organizations are scalable, a simple quantitative score can be assigned to each religious group which is a function of its rank and at the same time enables the investigator to reproduce the types of sub-organizations maintained by this church. That is, a religious group with a higher score than another group has not only more sub-organizations but more sub-organizations of particular types.

The ideal marginal frequency of the seven items given in Figure 1, A tells us how the items may be ranked. For individual items and for all religious groups, the ideal frequency of occurrence is Sunday School, 95 per cent; women's organization, 61 per cent; youth organization, 45 per cent; choir, 34 per cent; men's club, 15 per cent; young adult organization, 6 per cent; and older adult organization, 2 per cent.¹⁹ These frequencies point up another kind of order which is manifest through scaling, the ordering or ranking of items or, in this case, the ranking of sub-organizations. The ranking of the items seems to be quite stable—i.e., with one exception, no subclassification of religious groups thus far has revealed any other ranking of sub-organizations. The single exception is

¹⁹ The actual frequency of occurrence is Sunday School, 88 per cent; women's organization, 59 per cent; youth organization, 37 per cent; choir, 34 per cent; men's club, 13 per cent; young adult organization, 8 per cent; and older adult organization, 2 per cent.

Both young and older adult organizations have marginals (92 and 98 per cent) above the minimum criterion for reproducibility, while Sunday School (marginal frequency of 88 per cent in the modal category) is close to the accepted limit. Though these items automatically are reproducible, and so far as the formal criterion is concerned automatically in the same dimension as the remaining items, the only basis upon which they can be considered in the same universe is on rational considerations—i.e., they appear to be the same kind of attributes as women's organization, youth organization, and the like.

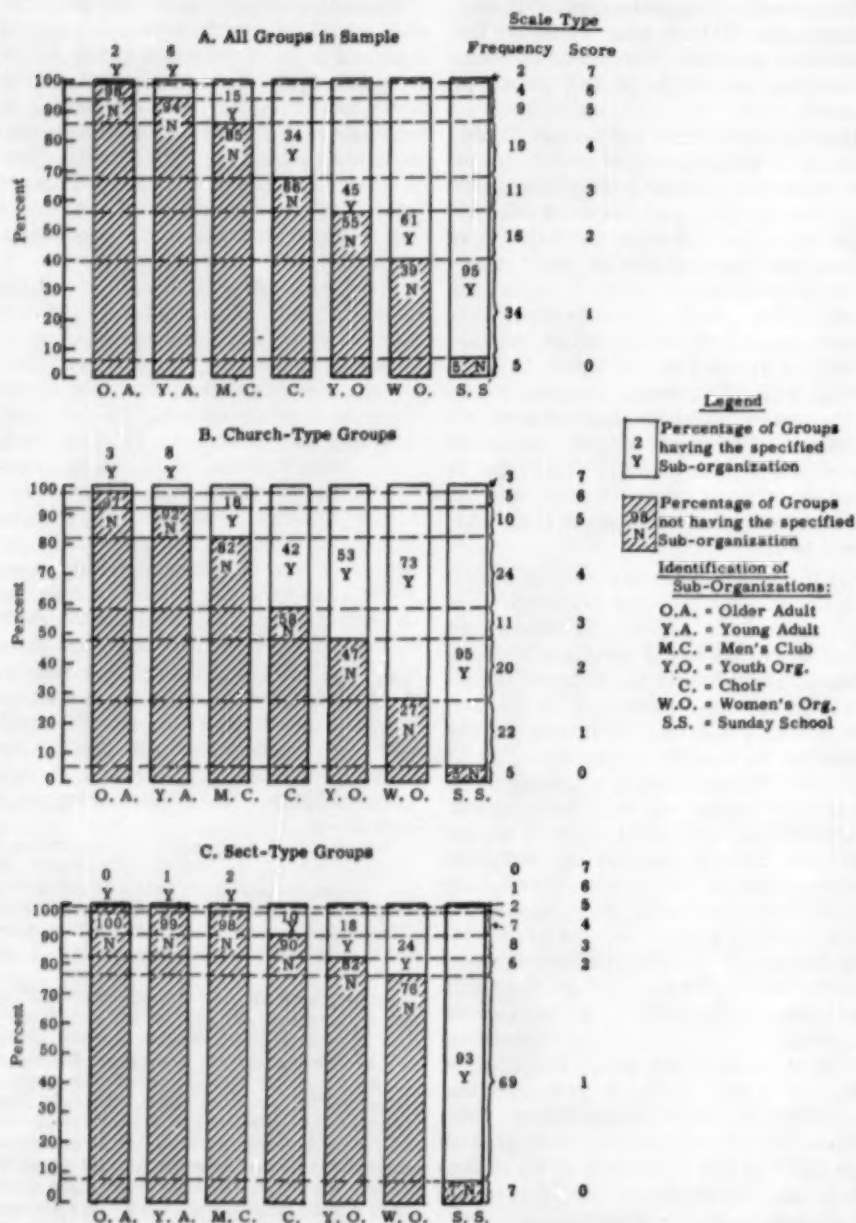


FIGURE 1. SUB-ORGANIZATIONS OF RELIGIOUS GROUPS IN RURAL MISSOURI: PERCENTAGE OF LOCAL CHURCHES HAVING EACH TYPE OF ORGANIZATION, AND SCALE TYPES, FREQUENCY, AND SCORES FOR ORGANIZATION SCALE

a classification by denominations. Some denominations by their specific denominational structure preclude the existence of some types of sub-organizations.²⁰ Nevertheless, denominational variation seems to be relatively minor in the total picture of rural religious groups, since the scale includes churches representing 43 denominations (Roman Catholic and 42 Protestant) in rural areas of the state.

It is pertinent at this point to ask why the sub-organizations of religious groups should scale at all? This is a question concerning the sociological underpinning for scales of institutional phenomena. In the present case, it is reasonable to assume that the sub-organizations scale because of a definite order of importance of these sub-organizations to the functional requirements of local religious groups. These functional requirements in turn are in line with the general institutional goals common to all the religious groups. Were not common institutionalized goals present among the religious groups, there is reason to believe that their functional requirements as well as their structural equipment would be of such diversity as to preclude scaling. As a consequence, scaling, perhaps more clearly than would otherwise be possible, enables us not only to determine that a pattern of the structural components of organizations exists but that it reflects a common set of functional requirements, and implicitly the degree of agreement on general institutional goals.

CHURCH-TYPE AND SECT-TYPE DIFFERENCES

One of the classifications which has been found most useful in the analysis

of religious groups has been the division of churches into church-type and sect-type.²¹ However, the writers who have made use of this distinction have not been able to provide rigorous definitions such as would enable the researcher readily to classify religious groups into the two types. In the present study, religious groups were classified by denomination into church-type and sect-type according to Clark's system.²² This is a classification which

²¹ E.g., see Olive Wyon (trans.), Ernst Troeltsch's *The Social Teaching of the Christian Churches* (2 vols.; New York: Macmillan Co., 1931); J. Milton Yinger, *Religion in the Struggle for Power* (Durham, N. C.: Duke University Press, 1946). Also, see Elmer T. Clark, *The Small Sects in America* (rev. ed.; Nashville, Tenn.: Cokesbury Press, 1949).

²² *Ibid.*

The church-type denominations are: Southern Baptist Convention, Negro Baptist, Congregational and Christian, Disciples of Christ, Negro Christian, Evangelical and Reformed Church, Federated and Nondenominational Community churches, Lutheran Church (Missouri Synod), United Lutheran Church in America, the Methodist Church, Negro Methodist churches, Cumberland Presbyterian Church, Presbyterian Church in the U. S., Presbyterian Church in the U. S. A., United Presbyterian Church, Protestant Episcopal Church, Roman Catholic Church.

The sect-type denominations are: Church of God Faith of Abraham, Church of God of Prophecy, Church of God Seventh Day, Jehovah's Witnesses, Seventh Day Adventist, Church of God Unclassified, Church of the Nazarene, Churches of Christ in Christian Union, New Light Christian, Pilgrim Holiness Church, Congregational and Protestant Methodist, Evangelical United Brethren, Apostolic Faith Mission, Assembly of God, Church of God Holiness, Fire Baptized Holiness Church of God of Americas, Reorganized Church of Jesus Christ of the Latter-day Saints, The Pentecostal Church Unclassified, Pentecostal Church of God in America, Inc., Pentecostal Holiness Church, United Pentecostal Church, Negro Pentecostal churches, American Baptist Association, Freewill Baptist, Fundamental Baptist, General Baptist, Primitive Baptist, Church of the Brethren, Churches of Christ, Mennonite Church.

²⁰ This is the primary reason for the disparity between the 95-per-cent ideal frequency of occurrence of Sunday Schools in religious groups and the 88-per-cent actual frequency of occurrence of this sub-organization.

places most of the older, better-established denominations in the church-type and the newer religious groups in the sect-type.

The utility of scaling in problems of relationship can be illustrated by examining empirically three hypotheses concerning church-type and sect-type religious groups. Church-type religious groups are generally considered to be more complexly organized in contrast with sect-type groups, which are relatively simple in social organization. The former are generally older, and consequently have had more time to develop a complex institutional organization. Moreover, the sect-type groups are generally more spontaneous and directly democratic in their collective behavior and presumably are not so strongly oriented toward increasing their degree of organization,²³ since that tends to destroy the basis for such behavior. In null form, then, the hypothesis is that there is no difference between church-type and sect-type religious groups in number and relative frequency of sub-organization.

The comparison can be seen in Figure 1, B and C. The profiles differ markedly for the two types of religious groups. Except for Sunday School, all sub-organizations occur much less frequently in sect-type than in church-type groups; men's clubs, young adult organizations, and older adult organizations are virtually nonexistent in the sect-type groups. The Sunday School, which has the primary function of training future members and indoctrinating present membership in the basic tenets of the church creed, is perhaps the one sub-organization most clearly indispensable to the functioning of religious groups. Thus, it appears about as often in one type of group as in the other.

²³ E.g., see Liston Pope, *Millhands and Preachers* (New Haven, Conn.: Yale University Press, 1942), pp. 123, items 16 and 19; and Yinger, *op. cit.*, p. 22.

A chi-square test applied to the two profiles provides a direct test of the null hypothesis. After the end two categories with the small percentages have been combined, chi-square is 110.65. The probability of a chi-square this large occurring due to random variation of sampling is immeasurably less than one time in a thousand. Consequently, we reject the null hypothesis and entertain the alternative that differences in frequency of sub-organizations do exist between church-type and sect-type religious groups.

However, the number of sub-organizations found in any church is presumably related to the number of members in it. This is a hypothesis which is hardly open to debate; the Pearsonian correlation coefficient of 0.58²⁴ between the size of the religious group and the number of sub-organizations readily substantiates it.

A salient difference between church-type and sect-type religious groups is ordinarily assumed to be one of size.²⁵ In the present study, the church-type groups averaged 121.5 members, as compared with 47.6 members in the sect-type groups (C.R. = 7.78). It is obvious, therefore, that to a considerable extent the differences between the organization scores of church-type and sect-type groups may be attributed to differences in the size.

This point is in some ways crucial, for, although church-type and sect-type religious groups have been observed to be different in terms of number of members, this is not usually taken as the primary distinguishing feature.²⁶ An important question is whether the difference in the organi-

²⁴ [$t_{99} = 15.91$] < 0.001 . The correlation of 0.58 is significantly different from $r = 0$, beyond the one-tenth-of-one-per-cent level.

²⁵ Cf. Charles S. Braden, "The Sects," *Annals of the American Academy of Political and Social Science* (Mar., 1948), p. 53; and Yinger, *op. cit.*, p. 19.

²⁶ Clark, *op. cit.*, p. 20.

TABLE 1. ANALYSIS OF COVARIANCE OF 501 RELIGIOUS GROUPS IN SUBORGANIZATIONAL SCORES (Y), AND SIZE OF RELIGIOUS GROUPS (X), BY CHURCH-TYPE AND SECT-TYPE RELIGIOUS GROUPS

Source of variance	Sum of squares and products				Errors of estimate		
	D.F.	$\sum y^2$	$\sum x^2$	$\sum xy$	Unexplained $\sum y^2 - \frac{(\sum xy)^2}{\sum x^2}$	D.F.	N.S.
Total	500	1,538.29	5,174,600.0	53,216.00	991.01	499	.....
Among church-type and sect-type	1	213.05	528,747.0	10,615.75	.....	.....	.....
Within church-type and sect-type	499	1,325.24	4,645,853.0	42,600.25	934.62	498	1.88

For testing adjusted church-type and sect-type means 56.39 1 56.39
 $P[F_{1,498} = 29.99] = < 0.001.$

zation scores of the two types still holds when size of group is held constant. If so, presumably this may be attributed to other independent characteristics of the two types of religious groups, such as their contrasting orientations to differentiation in their organization and administrative procedure—differences in procedure which are presumably consistent with an ordered and representative behavior as contrasted with a more spontaneous and less ordered group behavior.²⁷

The null form of the hypothesis, that church-type and sect-type religious groups do not differ in sub-organization scores when differences in the size of the groups are controlled, can be tested concisely as a problem in analysis of covariance. The result is summarized in Table 1. The variance remaining (56.39) after controlling differences in the size of group is significantly greater than might be obtained in random variation (1.88). Consequently, we reject the null hypothesis and entertain the alternative—that other important variables than the size of the religious

groups are related to church-type and sect-type differences in the extent of organizational development. Presumably at least one of these additional factors is the orientation of church-type religious groups to the development of church polity. In sect-type religious groups, this emphasis is subordinated to the orientation to religion as a way of life.²⁸ The differences in points of emphasis, we may assume, are manifest in the more elaborate organizational structure found in church-type groups. It is a development of religious group structure which, as has been shown, cannot be solely attributed to the larger average size of church-type religious groups. However, the specific influence of differences in religious group orientation on the ramification of religious group organization, along with the relevance of other possible factors, is primarily a problem for future research.

²⁸ This difference recently has been simply and succinctly stated in essentially this fashion by W. W. Sweet, in *American Culture and Religion* (Dallas, Tex.: Southern Methodist University Press, 1951), chap. 5.

²⁷ Pope, *op. cit.*, p. 123, nos. 16, 17, and 19.

SOME NOTES ON CUMULATIVE SCALES: A COMMENT ON COUGHENOUR'S PAPER

by Ira H. Cisin†

There has been a good deal of confusion about the use of cumulative (Guttman) scales for the testing of hypotheses and about the legitimacy of inferences which may be drawn from scaled observations. The purpose of this paper is to point out certain unsolved problems in connection with cumulative scales and to demonstrate the inadequacy of the scaling technique for the kind of data that Coughenour has presented.

Attempts to apply the technique of cumulative scales to non-attitudinal data are to be applauded. The early work on cumulative scaling filled a pressing need for an important wartime agency engaged in attitude research, but certainly the power of this tool is not fully realized in applications to attitudinal data; in fact, it may be argued that attitudinal data are far less likely to fit the cumulative model than other kinds, such as institutional data of the type presented by Coughenour. The difficulty in Coughenour's paper, then, arises not from his application of the cumulative model to non-attitudinal data, but rather from certain unfortunate mechanical characteristics of the data themselves.

In general, the testing of data for scalability is a kind of "goodness of fit" test, where the researcher asks himself how well the cumulative model fits the data which he has collected. To the extent that the model fits the data, the researcher infers that there is a single underlying variable which unites the various items of the data and accounts for the observed relationships. In the very early work on scaling, it was thought that the data for the items at hand could be regarded as a sample from a very large universe of items, and that it might be possible to infer the scalability of the larger universe of items from examination of the sample of items.¹ But no method has yet been found to justify the inference from sample to universe by means of statistical sampling theory, and the realization has grown that the scalability of a body of data justifies the inference of an underlying variable which accounts only for the observed relationships among the data at

hand. The attempt to construct practical criteria such that it would be possible to make inferences to a universe of items larger than the group observed has similarly failed.

Is it true, then, that "one of the major assumptions of scaling technique is that the items being scaled are but a sample of an indefinite universe of similar items or attributes and that the scalability or non-scalability of the sample of attributes enables the researcher to make certain inferences about the entire universe"? Certainly the sampling assumption is not made in the mathematical development of scale theory; it is not even a necessary assumption if the researcher wishes to examine the scalability of a body of data. What about the statement on inference from sample to universe? This would, at first, seem to follow logically from Guttman's statement that "scalogram theory shows that if the universe contains but a single variable, that is, if all questions have but a single content ordering, then the same rank order of the individuals upon this content will be obtained regardless of which sample of questions is selected from the universe." Guttman's statement means simply that if a universe of attributes forms a perfect cumulative scale, then any sample of items from that universe (regardless of how the sample of items is drawn; there is no assumption of randomness) will form a perfect scale. This can be readily seen in the following diagram:²

DIAGRAM 1

	Attributes				
	A	B	C	D	
1	X	X	X	X	
2	O	X	X	X	
3	O	O	X	X	
4	O	O	O	X	
5	O	O	O	O	
Persons					

It is clear that any two or more items from this perfectly scalable universe will appear

² In this diagram and in those which follow the notation is that used by Guttman, representing the left-hand side of a scalogram board, where X represents a favorable response and O represents an unfavorable response. The stub in these diagrams is labeled persons, although it is perfectly clear that institutions, cultures, or any other units of analysis are equally appropriate. It should be noted that throughout this and other discussions of scale theory, the persons (or other units of analysis) are regarded as a universe and not as a sample. The effect on the hypothesis test of regarding the "persons" as a sample remains one of the unsolved questions in scaling theory. This last point is not crucial in Diagram 1, but it is extremely important in imperfectly scalable universes discussed later.

†Human Resources Research Office, The George Washington University, Washington, D. C.

¹ Stouffer et al., *Studies in Social Psychology in World War II*, Vol. IV: *Measurement and Prediction* (Princeton, N. J.: Princeton University Press, 1949).

as a perfect scale. But it is not necessarily true that the observation of perfect scalability in a sample of items means that the universe of the items is perfectly scalable. In fact, as will be demonstrated shortly, the coefficient of reproducibility is not even an unbiased statistic except in the case of a sampling of items from a perfectly scalable universe.

As Guttman has pointed out, obviously if the sample of items is imperfectly scalable, they must be drawn from an imperfectly scalable universe. Let us consider some of these imperfectly scalable universes. Diagram 2 presents a chance case in which each item is completely independent of all the others. For ease in presentation, .5 has been selected as the favorable probability for each of the items. This universe of items can be considered an infinite universe simply by replicating the block of three items indefinitely or, more simply, by sampling with replacement.

DIAGRAM 2. CHANCE CASE

	Attributes			
	A	B	C	...
1	X	O	O	
2	X	X	O	
3	O	O	O	
4	O	X	O	
5	X	O	X	
6	X	X	X	
7	O	O	X	
8	O	X	X	

This universe has a coefficient of reproducibility of .83+. Now let us take samples of two from this universe. If we sample with replacement (regarding the universe as infinite) we get three samples with reproducibilities of 1.0 (if we recall that changes in item order are legitimate in the scalogram process), as well as the three kinds of samples which emerge from sampling without replacement. If we sample without replacement, we get three kinds of samples, each of which has a coefficient of reproducibility of .875. Thus, it is demonstrated that all the samples give coefficients higher than the universe coefficient for this case.

Now let us consider a *worst case*, in which the items are maximally negatively intercorrelated. Here the three items have, for convenience, favorable probabilities of .25, .5, and .75, respectively. Again, it is possible to consider this universe infinite by replicating the block of three items indefinitely or by sampling with replacement. Diagram 3 specifies this universe.

DIAGRAM 3. WORST CASE

	Attributes			
	A	B	C	...
1	X	O	X	
2	O	X	O	
3	O	X	X	
4	O	O	X	

The coefficient of reproducibility of this universe is .83+.³ If we select samples of two with replacement, we obtain three samples with coefficients of reproducibility of 1.0, as well as the three kinds of samples which would be obtained by sampling without replacement. If we sample without replacement we get one sample with a coefficient of reproducibility of 1.0 and two samples with coefficients of .875. Again, every possible sample yields a coefficient of reproducibility higher than that of the universe.

Let one conclude from this demonstration that a sample of items must always have a coefficient of reproducibility at least as great as that of the universe from which it was drawn, let us consider now a *good case*, one in which the universe is almost scalable. Such a case is presented in Diagram 4, employing favorable probabilities of 1/6, 2/6, 3/6, and 4/6 for the four items.

DIAGRAM 4. GOOD CASE

	Attributes			
	A	B	C	D
1	X	X	O	X
2	O	X	X	X
3	O	O	X	X
4	O	O	X	X
5	O	O	O	O
6	O	O	O	O

This universe, like the others we have considered, can be regarded as infinite by replicating the block of four items indefinitely or by sampling with replacement.

* A convenient formula for the lowest possible coefficient of reproducibility from a set of items in which the favorable probabilities are $\frac{1}{n+1}, \frac{2}{n+2}, \frac{3}{n+3}, \dots, \frac{n}{n+1}$ (n being the number of items), has recently been developed at the Human Resources Research Office. The minimum coefficient of reproducibility is $1 - \frac{1}{4 + 2\sqrt{[n]}}$, where the

bracket is read as "the integral part of," indicating the largest integer resulting from the computation in the bracket. It is readily seen that as n increases without bound, the minimum coefficient of reproducibility approaches .75 as a lower bound, for items with probabilities as specified above.

The coefficient of reproducibility of this universe is .96—.

If we select samples of two with replacement, we have four samples with coefficients of 1.0, as well as the six kinds of samples available from sampling without replacement. If we sample without replacement, we have six kinds of samples, four of which show a coefficient of reproducibility of 1.0 and two of which have a coefficient of reproducibility of .92—. Thus, it is possible for a sample to have a lower coefficient of reproducibility than the universe from which it is drawn. However, it is to be noted that the expected value of the coefficient of reproducibility (the mean value of the coefficients derived from all possible samples) is higher than the coefficient of reproducibility of the universe.

It is perfectly clear that the coefficient of reproducibility is not an unbiased statistic; its expected value in samples is not the universe value. In the three cases cited, the expected value of the coefficient of reproducibility is consistently higher than the universe coefficient of reproducibility, but this may not always be the case. It is possible to construct finite universes in which the coefficient of reproducibility from samples selected *without replacement* is an unbiased statistic; it may also be possible to construct universes in which the expected value of the coefficient of reproducibility is an underestimate of the universe coefficient of reproducibility.

Since the coefficient of reproducibility is not an unbiased statistic, inferences based on this coefficient from a sample of items to a universe of items are extremely hazardous. It is obvious now that the notion of a sample of items is not even a necessary assumption, much less a major one, and it has been shown above that it would be an extremely dangerous assumption (so far as the process of inference from sample to universe is concerned) if it were made.

Now what about the criteria for rejection or acceptance of a body of data as scalable? We could not possibly be testing the hypothesis that these data are a sample from a perfectly scalable universe, for two reasons: (1) Even if there are no errors in the data, we cannot make inferences from the sample to the universe; and (2) as Guttman has said, if there are errors in the data, then they could not possibly be drawn from a perfectly scalable universe. Further, as has been shown above, we cannot test the hypothesis that the data are from an "almost perfectly scalable" universe, since, even in our worst case, we observed a high proportion of perfectly scalable sam-

ples. What we can do is to test the goodness of fit of the scale model to the data which we have at hand, and ask: To what extent is the cumulative model descriptive of these data? and to what extent would scores derived from the cumulative model reproduce the data? The coefficient of reproducibility is actually an exact measure of the proportion of correct reproductions of the original data which would be made if the units of analysis were scored to the nearest scale type.

Although it is true that, in the early work, an attempt was made to construct criteria which would justify inferences from sample to universe, it is clear now that these criteria are based on utility rather than on theory. When we say that we require a given coefficient of reproducibility, we are saying that only if the coefficient is at least that high can we get any real advantage out of scoring by scaling methods; only if the coefficient is at least that high will scale scores reproduce the original data sufficiently better than unit scoring to justify the scaling effort.

From another point of view, we do not test the hypothesis of scalability against the hypothesis of non-scalability. We measure the extent to which a body of data is scalable, the extent to which a single underlying cumulative variable explains the observed relationships. And the coefficient of reproducibility is, in a sense, a measure of the interrelationships among the items. It must be remembered, of course, that this coefficient does not vary from 0 to 1 and, as observed in the chance case above, it can be quite high even when the items are completely independent of one another.

The main point of this discussion of criteria is to deny the assertion that the criteria in any way stem from scaling theory, much less from the assumption that the observed items are a sample from some universe of items. The reproducibility criterion, as indicated above, is simply an arbitrary figure, established by the users of scales in an attempt to define a point below which their use is not sufficiently advantageous.

It is customary to eliminate from consideration those items whose marginals are at the extreme ends of the continuum, i.e., those items whose favorable probabilities are close to 0 or close to 1. The reason for this elimination is that such items will necessarily meet the criteria of scalability whether they are related to the other items or not. Thus, it is well known that an item cannot be less reproducible than the larger of its two probabilities; an item with a fa-

avorable probability of .95 cannot be less reproducible than .95 under any circumstances. A collection of such items, however unrelated, would always meet the reproducibility criterion.

Coughenour is certainly correct when he specifies that the items which are subjected to scale analysis must always meet the criterion that the researcher considers them worthy of scale analysis, i.e., that he is willing to hypothesize their unidimensionality and subject them to the test, but it is doubtful that the judgment of the researcher ought to be substituted for the other test criteria.

Coughenour has argued that the existing criteria for the use of scales are derived from the assumption that the items subjected to scale analysis are a sample from an infinite universe of items; he has further argued that since his items could be considered exhaustive of a finite universe, it was not necessary for him to apply the existing criteria. In the present paper, an attempt has been made to demonstrate that the assumption that the observed items are a sample from any larger universe is a dangerous one, and certainly not a necessary one. Further, it has been pointed out that the criteria are arbitrary and do not in any way derive from Guttman's theory of scales—that the criteria exist simply because they have been useful in differentiating cases where scaling would be advantageous from cases where it would not. It remains for Coughenour to demonstrate that his decision to abandon the criteria while continuing to use scale scores has given him a better scoring system (i.e., greater power to reproduce the original data from the scores) than he would have obtained otherwise, or to demonstrate that the observed cumulative relationship among items was significantly greater than might have occurred by chance. The latter demonstration is a straightforward computational exercise for which the data are not available in his paper.

REJOINDER

by C. M. Coughenour

As Cisin remarks, his primary thesis is: (1) the current arbitrary criteria of scaling (in particular, the coefficient of reproducibility)

are not derived from scaling theory; (2) these criteria do not provide an adequate basis for a practical guess regarding the scalability of an indefinite universe of attributes even when the data at hand sufficiently approximate a cumulative scale. In reply I should like to point out: (1) I do not disagree with the first part of this thesis; (2) although the argument Cisin presents in support of the second part has considerable merit, it is largely beside the fundamental question at issue in this study. Instead, the major practical question is: Must one use the same arbitrary criteria in testing the "goodness of fit" of a finite set of items as was originally set up in order to provide a basis for inferring the scalability of an indefinite universe from a finite set? Although Cisin asserts that this must be so, he provides very little support for this view.

With regard to the arbitrary criteria to be used in the present study, the basic question is: Can the coefficient of reproducibility be used as a practical measure of the "goodness of fit" where a small number of items exists and when some have high marginal frequencies? In the attempt to answer this question, Cisin reiterates the earlier practical considerations upon which the early arbitrary criteria were used. However, as he has attempted to show, an important reason for these practical considerations (i.e., the attempt to infer the scalability of an indefinite universe of attributes) now can not be regarded as valid. In any case, in recognition of the effect of a small number of items upon reproducibility, I have not used the usual form for the computation of the coefficient, nor have I abandoned all of "the other test criteria." Unfortunately, the practical consequence of using the criteria as I have done is not discussed. It is a problem, incidentally, that can be answered definitely only after the continued use of these criteria in a variety of empirical situations. In the present research, from a practical point of view, the more limited criteria provide an adequate basis for assessing the "goodness of fit." As further evidence of this fact, the cumulative relationship among the items is 0.79 greater than a chance relationship, where a chance relationship is 0 and a perfect cumulative relationship is unity.

OLD WORLD EXTINCTION AND NEW WORLD SURVIVAL OF THE AMISH: A STUDY OF GROUP MAINTENANCE AND DISSOLUTION*

by John A. Hostetler†

ABSTRACT

This article discusses the Swiss and German origins of the Amish Mennonites, the early history of the sect, its dissolution in Europe, and its survival in America. Survival in the New World is attributed to the perpetual sectarian conflict between the parental group and the subject, the emergence of a consciousness of difference from the world—expressed in costume and other traditions, and community association and proximity never realized on the Continent on account of differing landholding systems.

The Amish are an exceptionally interesting group from the standpoint of factors affecting social change. The study of this group provides the student of social change with certain advantages over the study of earlier but presently extinct minority groups. The Amish in America illustrate the survival of Old World social institutions and values, and they demonstrate non-conformist behavior and minority survival in a technological era and a period of constant change.

Through an increasing number of studies, the social organization of Amish life is becoming more widely and accurately known. Over twenty-five graduate theses in American university libraries treat some phase of Amish life. The most important community research on the Amish to date is probably that made by the Bureau of Agricultural Economics, United States Department of Agriculture, as reported by Walter Kollmorgen.¹

*This paper is based on the author's research and observation in several European countries under a Fulbright scholarship to Heidelberg University. Read at the annual meeting of the Rural Sociological Society, University of Illinois, Urbana, Ill., Sept., 1954.

†The Herald Press, Scottsdale, Pa.

¹Walter M. Kollmorgen, *Culture of a Contemporary Rural Community: The Old Order Amish of Lancaster County, Pennsylvania*, Rural Life Studies No. 4 (Washington, D. C.: USDA, Sept., 1942).

For listings of other studies, see John A. Hostetler, *Annotated Bibliography on the*

The general findings of past research may be summarized briefly, as follows: The Amish community maintains certain features of stability through isolation and in-group integration. Its stability is credited to the Amish people's strongest positive interests, religion and farming. Though the group has successfully maintained a distinguished subculture of its own, one of the basic problems of this subculture is that of adapting to changing situations. There is a gradual infiltration of Amish culture by outside patterns, with the prospect that, if the acculturation process continues, the Amish society will eventually disappear.

It is an interesting fact that most specialized studies of the Amish—whether concerning music, language, or some other subject—have found it necessary to discuss the specific aspect in relation to the group phenomenon. This attests to the importance of the group in Amish social organization and to the many values which are group-shared. The Amish communities are associations of the type designated by Cooley as the primary group. They are a by-product of intimate association and cooperation, involving "the sort of sympathy and mutual identification for which 'we' is the natural expression. One lives in the feeling of the whole and finds the chief aim of his will in

Amish (Scottsdale, Pa.: The Herald Press, 1951).

that feeling."² The primary group is fundamental in forming the social nature and the ideals of the individual.

This paper will point out the importance of the community as against the family type of primary group in the perpetuation of Amish culture. The European Amish never developed primary groupings beyond the familial type, while in America the system of land acquisition permitted Amish families to settle in close proximity to one another, thus forming communities. The cultural survival of the Amish in America is a function of community groupings. A discussion of Amish origins and development is essential for understanding the survival of this sect.

ORIGIN AND EARLY HISTORY OF THE AMISH

Sociologists have pointed out that sects generally originate during times when the fixed order of society is collapsing, and that their origin is associated with sudden changes in the political and economic structure.³ With the Reformation sects this was undoubtedly true, but this generalization does not apply very well in the case of the Amish. The split which brought the sect into being occurred between 1693 and 1697, fully 150 years after the beginning of the Reformation and at a time when Anabaptists or Mennonites (from whom the Amish came) were severely persecuted by the established church and state authorities. However, the Amish are an excellent example of a sect if one defines the sect as a group developing out of a schism from a parent ecclesiastical body and maintaining conflict with the parent group and the established religions.

The Amish originated as a subset of the Swiss Mennonites. Fortunately,

letters and documents on this controversy have been preserved; some of them have been cherished as family keepsakes, and others have been published at various times.⁴ Amish origins can best be understood from the standpoint of the personality of the reformer and prophet,⁵ the need for individual expression even to the point of fanatical behavior, orthodoxy, and radical breaks from organizations where social prestige was not attainable. The Amish sect took its name from their spokesman, Jacob Ammann, a Swiss Mennonite bishop, apparently a young man at the time of the split.

The controversy within the brotherhood resolved around three questions:⁶ (1) Should excommunicated members be banned (or shunned, known as *Meidung*) at the family table as well as at the communion or spiritual table? (2) Should the true-hearted people (*die treuherzigen*, sympathizers of the sect who gave them food and protection) be considered as "saved" even though they had not been rebaptized? (3) Should members who willfully tell a lie be excommunicated? Traveling through his native country and Alsace, Ammann visited congregations and demanded from each minister an answer to one or more of the three questions. Those who took a tolerant position on these questions he excommunicated and placed under the severe ostracism of *Meidung* (shunning).

⁴ The most complete collection in the English language (but an inferior translation) is *Letters of the Amish Division of 1693-1711* (Oregon City, Ore.: C. J. Schlaabach, 1950).

⁵ A good general discussion of this subject may be found in: Joachim Wach, *Sociology of Religion* (Chicago, Ill.: University of Chicago Press, 1944). See especially his chapter VIII, "Types of Religious Authority."

⁶ For a thorough discussion of the division, see Milton Gascho, "The Amish Division of 1693-1697 in Switzerland and Alsace," *The Mennonite Quarterly Review*, XI (Goshen, Ind.; Oct., 1937).

² Charles H. Cooley, *Social Organization* (New York: Charles Scribner's Sons, 1915), p. 23.

³ E.g., see Ellsworth Faris, *The Nature of Human Nature* (New York: McGraw-Hill Book Co., 1937), p. 48.

Those who took the other position became the nucleus of the Ammann following.

John Reist, a Mennonite bishop who did not share the stricter application of shunning, became the spokesman for Ammann's opponents. The doctrine of shunning was not practiced by the Swiss Mennonites, and it was entirely new to them; but it had been advocated by Menno Simons and others of The Netherlands a century and a half earlier. There was considerable animosity between Reist and Ammann and those who sided with them, as evidenced by the vocabulary which they employed. Ammann called Reist an "apostate," a "sectarian," and a "rebel." Reist labeled Ammann a "blasphemer." Other terms exchanged between the two were: "liars," "heretical spirits," "untruthful," "false teachers," "lying grayheads," "unbelieving people," "banished," "excommunicants," and "the devil's servants." Of the 69 preachers known to have taken sides in the controversy, 22 lived in France, 24 in Germany, and 17 in Switzerland. At least 27 sided with Ammann.

Ammann forbade his members to attend the services of the Reist group. Ammann said that Reist, because he was older, claimed for himself more authority, even though both were ordained to equal offices. He accused Reist of "spiritual pride." Meetings were held in secret places, mostly barns, to reconcile the differences. One eyewitness describes slight overt conflict in one of the meetings:

It was agreed that while one was speaking the others should remain silent and listen. Jacob [Ammann] then spoke and the audience heard him. But when I, Peter Geiger, wanted to speak, he refused to wait, and arose and wanted to leave, and I caught him by the shirt sleeve, saying, let me present my word also; but he jerked his arm away, and left the room.

Other points in the controversy were the trimming of the beard, one's per-

sonal appearance, attendance at state churches, and whether communion should be held once or twice a year. Ammann warned:

If anyone desires to conform to this world, by trimming the beard, by wearing . . . attractive apparel, and will not confess that it is unrighteous, he shall be justly punished.

His opponent replied:

It is contrary to the Gospel to affix one's conscience to a pattern of the hats, clothes, stockings, shoes, or the hair of the head . . . then undertake the enforcement of such regulations by punishing with the ban . . .

The outcome of the dispute was that Ammann excommunicated all who did not agree with him "from the Christian congregation and the church of God," and he and his group applied the strict enforcement of *Meidung* to the excommunicated. About ten years later Ammann admitted that he and his group had been "too rash and hasty," and he attempted to regain the respect of those he had excommunicated. But all attempts at reconciliation failed.

It will be observed that this conflict was with the parental sect group, not with the larger established religious institutions. Later, when both Mennonites and Amish were being deported from Switzerland, the two groups refused to enter the same ship for the voyage down the Rhine.

THE DISAPPEARANCE OF THE AMISH AS A SEPARATE GROUP IN EUROPE

Today, all Amish groups in Europe have been assimilated into the Mennonite, other Protestant, and Catholic religions. During the Swiss persecutions of the seventeenth century, the Amish settled in Alsace and Lorraine, some went to the Palatinate, and others found their way to Holland. From all these places and at different times they emigrated to America. Those who remained in Europe could do so only because they were given protection by noblemen on whose estates they had

proved themselves industrious and profitable tenants.

After 1750, there were only three Amish congregations in Switzerland. A century later they forgot their differences and cooperated with the Mennonites in religious life. The Amish who went to Holland took with them their rules of conduct and distinguishing beliefs—beards, strap instead of lace shoes, hooks and eyes instead of buttons, and the strict interpretation of the ban. After the first generation they lost their Amish consciousness, and after seventy years they were speaking the local Dutch language.

In France in Alsace and Lorraine—there is today a Mennonite population of about 2,700 members, most of whom are descendants of the Amish. A French newspaper, in 1819, stated that these people did not take civil oaths, refused military service, did not go to law, and refrained from card playing and the use of tobacco. At the time, these were traits not only of the Amish but of Mennonites generally.

The Amish who emigrated to the Palatinate and south Germany gradually merged with local Mennonite congregations. The last Amish group to merge officially with the Mennonites was the Ixheim congregation near Zweibrücken; this merger occurred in 1937. Some of the older members wore hooks and eyes on their coats until 1890; however, buttons were generally accepted over a century ago.

The Amish who went to Bavaria overcame many prejudices against them by diligent work and agricultural inventiveness. Because they were somewhat excluded from village life, most of them became tenants on large estates. There they had more opportunity to experiment with new farming methods than did the peasants with their few plots of ground and deeply regimented economic life. Because of their nonconformity to the established state religion, they had to

work harder and produce more than did non-Amish tenants; this gave them the incentive to adopt new methods. Many of the descendants of the Bavarian Amish became superior farm managers; their distinguishing Amish traits were lost before the advent of the present century.

FACTORS IN THE DISAPPEARANCE OF THE AMISH IN EUROPE AND THEIR SURVIVAL IN AMERICA

The Amish never lived in compact settlements on the Continent. Scarcity of land prevented them from forming community groupings, and individual families who fled from authorities rented or purchased property wherever they were given asylum. Thus, each Amish family became a social unit unto itself.

Geographic distance made intercourse between Amish families extremely difficult. Their worship—held in their own farm houses—was monthly or semi-monthly, but always at different places. Those who lived within reasonable driving distance could participate, but many attended only once or twice annually. Under such conditions, the scattered Amish families associated more with local non-Amish persons than among themselves. Amish men who became renters or managers of large estates employed many laborers whose families also lived on the estate. The laborers, who were usually of a different religious affiliation, lived side by side with Amish families on the same estate year after year. Marriages outside the group were forbidden by the Amish religion, but when necessity became too great such marriages were permitted. Probably because of earlier persecution and of their desire to be tolerated, the Amish made no attempt to evangelize or gain religious converts other than their own offspring.

The Amish variation from Mennonitism in Europe was mainly an ideolog-

ical difference, and in material culture the differences were only slight. The Amish advocated a more rigid application of the ban toward those who had been excommunicated from the church. The Swiss Mennonite practice was to ban expelled members only from the communion table. Ammann extended its application from the communion to social and domestic relations. The wife of an expelled husband, for example, was to suspend conjugal relations with him. (This is still practiced among the Old Order Amish in America.)

That the community is an important factor in the maintenance of tradition is illustrated best in the development of Amish costume. In Europe, where family instead of community organization was dominant, the Amish wore the same clothing styles as their rural non-Amish neighbors. They were never conscious of a distinctive costume. The general appearance and dress of the Amish was similar to that of thousands of other emigrants from the Rhineland at the time of their emigration. In America they found themselves conscious of a different dress from their frontier neighbors. This difference gave them a new way of recognizing their own kind. As protection against change in the strange environment of the New World, and against pressure toward change which they interpreted as the "world," they traditionalized the dress styles they brought with them.

Wearing a beard was common in Europe until about the eighteenth century, and the Amish, who questioned innovations, kept the beard as a symbol of something sacred. The same was true of hooks and eyes; buttons were first used by the ruling classes as ornamentation, and it was quite natural that the Amish should retain the old and shun the new. The Amish dress coat (the *Mutze*), broadfall trousers, and black wide-rimmed hats are adaptations from the ordinary dress of the

Palatines long ago. By comparing these with drawings of regional costumes in Europe a century or more ago, the similarity in dress is established beyond doubt.

The dress of the Amish woman today is almost identical with examples in Palatine museums. The white *Häubchen* (prayer cap) of the Amish, the *Halsdusch*, the *Lepple*, and the "scoop" hat were the ordinary dress of the population of Alsace, the Palatinate, and other parts of Europe. The Amish bonnet of today is an exception, and, since the Amish preceded the bonnet era in Europe, they apparently adopted this headpiece from a New World source.

Their present consciousness of difference from others is heightened by a belief in a Biblical injunction to nonconformity: "Be not conformed to this world," and "Be ye not unequally yoked together with unbelievers." This has given rise to the in-group feeling that they are predestined to be a "peculiar" people. The dress of the Amish provides for their own members a constant stimulus for nonconformity, and to nonmembers the dress represents the symbolic patterns of Amish culture.

That the Amish attitudes of hostility toward change and reverence for past traditions is a function of the primary community group has already been pointed out. A second principle of Amish survival which seems to be a function of the community has been the perpetuation of the original conflict between the parent group and the subsect. The original issue was and still is: Should expelled members be banned in domestic relations or only from the communion table? There is scarcely a community of Amish in America where there are no Mennonites nearby; so the *Meidung* controversy has been perpetually renewed in local communities. The many divisions and variations of practice among

the Amish are the result of strict and liberal interpretations of *Meidung*. In small Amish communities—particularly in the Midwest—where associations with non-Amish neighbors are numerous, strict *Meidung* has been discontinued in favor of a more moderate practice. However, the threat of *Meidung* is an effective preservation technique and makes deviation from the group norms extremely difficult for the individual.⁷

The rationale for the strict *Meidung* is that the doctrine is commanded in Scripture, and therefore needs to be carried out as the will of God. On this particular point the Amish are strict "Biblicists." Had there been no Mennonites in the same geographic communities with the Amish in America, or had there been no continuing difference of opinion on the question of *Meidung*, it is probable that the Amish culture would have been dissolved. This controversy has produced a survival value on the principle that "misery loves company and in company there is the means to continue. Misery without company spends itself quickly and new equilibriums are established with the wider society."⁸

AMISH-MENNONITE RELATIONS

Even though they are in conflict on some points, the Amish nevertheless maintain certain generalized attitudes of tolerance toward the Mennonites. The Amishman is more sympathetic and socially nearer to the Mennonite religion than to the larger Protestant

or Catholic bodies. This is why Amish parents frequently permit their non-conforming sons and daughters to become members of the Mennonite group rather than some other religion. By leaving the Amish group entirely, the deviant obtains his freedom and the group is protected from any further "harmful" association with him. This has probably been an important factor in the survival of the very conservative groups of Amish.

In a recent study of a local group in Mifflin County, Pennsylvania, it was found that of 115 Amish offspring who did not join the church of their parents, 24 per cent affiliated with more liberalized Amish groups and 44 per cent chose the Mennonite Church.⁹ Only about eight per cent chose affiliations which were neither Amish nor Mennonite. The same study revealed that about a third of the Amish children affiliated with groups other than their own.

Though the rate of membership loss is apparently excessive, the Amish population as a whole is increasing. This is generally attributed to their very large families.¹⁰ The Old Order Amish group is listed among the fastest-growing religious bodies in the United States.¹¹

The writer estimates that 60 to 70 per cent of the children born into Amish families in the New World have merged with Mennonite (non-Amish) groups. In some instances whole congregations have changed their affiliation to the

⁷ In recent years, the strength of the Old Order Amish *Meidung* was tested by an Amishman who sued his former church officials for \$50,000, claiming damages because he had been excommunicated and shunned by them; the court upheld his claim for one-fifth of that amount. See John Howard Yoder, "Caesar and the *Meidung*," *The Mennonite Quarterly Review*, XXIII (Apr., 1949), pp. 76-98.

⁸ The writer is indebted to Roy C. Buck, Pennsylvania State University, for this quotation.

⁹ John A. Hostetler, "The Amish Family in Mifflin County, Pennsylvania" (unpublished M.S. thesis, The Pennsylvania State College [now University], 1951), p. 210.

¹⁰ In the Mifflin County study, the average number of children born per completed family was 7.0 (*ibid.*, p. 16); Maurice A. Mook, Pennsylvania State University, reported an average of 7.4 in a group of 25 completed families near Atlantic, Pa. (unpublished data).

¹¹ *Information Service* (Mar. 8, 1952), National Council of the Churches of Christ.

Mennonite group. Three regional Amish conferences merged with the Mennonite Church during the last century.

RESISTANCE TO CULTURE CHANGE

The technological changes affecting many of the American social groups and institutions did not affect the Amish to a great extent until the present century. Because of their somewhat self-sustaining social, economic, and religious communities they were able to resist change or greatly retard it. Among the traits of culture which the Amish have resisted, and with which some of the Amish communities have compromised only after a long struggle or have not compromised at all¹² are the following:

Church practices

- Meeting houses
- Four-part singing
- "Note" books or laymen's use of Bibles at preaching service
- Sunday Schools
- Revival meetings

Clothing and accessories

- Buttons and zippers
- Suspenders in various forms:
 - One or 2, or none at all
 - Straight down
 - Crossed at back
- "Store" clothes
- Hats for women
- "Bosom" shirts, detachable collars
- Modern-style underwear
- Fine shoes and ladies' high-heeled shoes

Personal grooming

- Moustaches
- Parted hair
- Parted hair, except in center

Housing fixtures and furnishings

- Central-heating furnaces
- Storm windows and screens
- Carpets
- Window curtains
- Writing desks
- Sofas

Household and garden conveniences

- Electricity
- Telephones
- Sewing machines
- Lawn mowers

Farm machinery and equipment

- Brightly painted farm machinery
- Tractors (at all):
 - With tires
 - For field work
- Steam threshers
- Windmills
- Sausage grinders

Transportation

- Buggies (at all):
 - With tops or "falling" tops
 - With springs
 - With rubber tires
 - With steps
 - With dashboards
 - With whipsockets
- Elaborately decorated harness
- Painted wagons
- Bicycles
- Automobiles

Miscellaneous

- High-school education
- Musical instruments

There is some evidence that the Amish not only retain the older traits but modify them in the direction of more conservatism. The prescribed length of the haircut for men, for example, is longer today in some localities than it was 25 or 50 years ago. This may be a kind of reactionary protest against change and it may play a part in cultural survival; further study of this point would be desirable.

CONCLUSIONS

The history of the Amish suggests that cultural inertia or a slow rate of cultural change is easier to maintain in primary community groupings than in the family type of social organization. Unlike the Amish in the New World, the European Amish never developed a subculture of their own, chiefly because they lived as family units at considerable distances from each other. They were thus in an unfavorable position to withstand the pressure toward

¹² The group which has most consistently resisted change is known as Old Order Amish. Their communities (about 50) are located in 19 states and in Ontario, and number about 16,000 baptized (adult) members.

conformity to the general culture and to governments pushing programs of national unification.

The Amish have survived in America because they formed primary communities where their families lived in

close proximity. That they have been able to maintain tradition so well and to carry out their preference for doing a thing the way it has always been done is a product of their community groupings in America.

SOCIAL MOBILITY AND URBANIZATION*

by Seymour Martin Lipset†

ABSTRACT

The data collected in the Oakland Mobility Study were subjected to a secondary analysis to test the relationship between geographical and occupational mobility. The findings indicate that the larger a person's community of orientation (the community in which he spent his teens), the more likely he has been upward-mobile. This suggests a continuing pattern of social mobility in which migrants to metropolitan centers from rural areas or small urban communities take over the lower-status positions, while native urbanites move up in the occupational structure.

A number of hypotheses are then suggested to explain why large cities are more likely to be characterized by high rates of social mobility than other communities, and why natives of metropolitan centers are more prone to be upward-mobile than those originating in other parts of the country.

Discussion of the factors which have helped preserve the "open" character of the American class system has traditionally pointed to the role of the immigrant as the base of the class ladder upon which the native-born climbed. Until the end of mass immigration in the 1920's, millions of immigrants entered the economic structure

in unskilled and semiskilled occupations. The children of the previous generation of immigrants were, presumably, able to secure the next highest level of jobs which opened up in an expanding economy. The end of mass immigration is, therefore, now cited as a major reason for predicting the emergence of rigid class stratification in the United States. In this paper, evidence will be presented which suggests that certain internal structural trends—specifically those associated with increased urbanization and internal migration—operate to continue to make possible a pattern of social mobility similar to that posited as resulting from high rates of immigration.

Heavy internal migration is a continuing aspect of American society, occurring in depression, in wartime, and in prosperity. What is the effect of the movement of tens of millions of Americans on their socio-economic position, on that of their children, and on the structure of communities? Such questions would best be answered by a systematic research project designed to analyze the relationship between migration and social mobility. As a preliminary contribution to such research, the data collected in the Oakland mobility study have been subjected to a secondary analysis to learn what hy-

*This article is one of a series based on the Oakland labor-mobility survey, conducted by the Institute of Industrial Relations, University of California, Berkeley, during 1949-50. In this survey, 935 principal wage earners were interviewed, chosen as a random sample from Oakland, California, households after eliminating the highest and lowest socio-economic areas in the city. A standardized questionnaire was used, covering the subject's family background, education, area shifts, job history since leaving school, and other factors considered to be important in an analysis of labor mobility in this community. For a detailed description and analysis of the sample design and methods of this study, see William Goldner, "Oakland Mobility Survey: Summary of Methodology" (mimeo.; obtainable from Institute of Industrial Relations, University of California, Berkeley), pp. 1-46.

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†Columbia University, New York, N. Y.

potheses are suggested by examining the relationship between geographical and occupational social mobility.¹

EXTENT OF MOBILITY

The geographically mobile character of the members of the sample can be seen from the following data. Only 24 per cent were born in the San Francisco Bay Area, with an additional 8 per cent born in other parts of California. A large majority of the respondents, 61 per cent, began their working careers outside the San Francisco Bay Area. Once having reached adulthood, as defined by entrance into the labor market, the sample's members continue to reveal a pattern of migration. More than three-quarters of them have worked in two or more communities; as many as a third have held jobs in five or more areas.

In an attempt to analyze the effect of migration on current position in the occupational structure, the respondents were classified according to the size of the community in which they spent their teens (community of orientation).² While there is a certain amount of unreliability in such information, the data revealed significant differences between the size of the community in which the respondent spent his most important preemployment years and his later job career. For example, a comparison of the total work careers of men coming from communi-

ties of different sizes indicates that the smaller the community of orientation of present (1949) Oakland residents, the more likely they are to have spent a considerable proportion of their work careers in manual occupations. (See Table 1.)

EFFECT OF ORIGINAL COMMUNITY BACKGROUND

The data clearly point to the role which original community background plays for residents of large cities. Those coming from a rural background are most likely to have been manual workers for most of their careers. Those from towns and small cities reveal a similar job history. The typical member of the sample coming from a village under 2,500 in population spent an average of 41 per cent of his work career in nonmanual occupations, as compared with 53 per cent for one who spent his teens in a metropolitan center.³ The data indicate two principal "breaking points" in the influence of community of orientation on job careers: (1) There is a sharp break between those from farms and all others; and (2) among those from villages, towns, and cities, the largest differences are between communities under and over 250,000 in population.

While Table 1 treats the entire work history of the respondents, regardless of where the jobs were located, Table 2 presents the relationship between community of orientation and present

¹ Since the Oakland mobility study was not designed for the purpose, this paper, like all secondary analyses, cannot pretend to offer a rounded presentation. Nevertheless, it may serve as another example of the way in which sociologists may profitably re-analyze some of the vast amounts of empirical data collected in the past two decades.

² The community of orientation was obtained by asking the respondents: "Where did you live most of the time between the ages of 13 and 19? Did you live inside the city limits? Did you live on a farm?" Each community was then classified according to the population size reported by the census.

³ The analysis revealed that size of community of orientation, rather than migration background *per se*, was most crucial in affecting subsequent career patterns. That is, there is little difference between natives of metropolitan San Francisco and natives of other large urban centers. If anything, migrants from other metropolitan areas were even more successful than native Bay Area residents. The difference, however, seems in large part related to the fact that the natives in the sample were somewhat younger than the migrants, and consequently were not as close to the peak of their careers as migrants.

TABLE 1. RELATION OF COMMUNITY OF ORIENTATION TO AVERAGE PROPORTION OF CAREER SPENT IN EACH TYPE OF JOB*

Type of job	Type of community of orientation					
	Rural		Urban, by population size			
	Farm (N = 131)	Nonfarm (N = 87)	2,500- 24,999 (N = 71)	25,000- 249,999 (N = 75)	250,000- 749,999 (N = 42)	750,000 and over (N = 250)
	<i>Average per cent of career</i>					
Nonmanual	27	41	45	46	52	53
Manual	57	52	52	49	44	43
Farm	11	2	1	2	1	1

*Includes only respondents aged 31 and over. The average proportion of career spent in a specified type of job applies to the group of respondents in the size-of-community category. Each respondent's career was individually analyzed, and the proportion of career time spent in each type of job was calculated. These individual percentages were averaged to obtain the group averages presented in the above table. Because of the biases involved in averaging unweighted percentages, the proportions cannot be summed nor do the implicit sums account for the total career.

TABLE 2. RELATIONSHIP BETWEEN COMMUNITY OF ORIENTATION AND PRESENT JOB

Present job	Type of community of orientation			
	Farm	Rural- nonfarm, and urban, under 250,000	Urban, over 250,000	All types
	<i>Percentage distribution of respondents</i>			
All types..... (N = 898)	19	33	48	100
Nonmanual..... (N = 510)	14	31	55	100
Professional..... (N = 68)	12	48	40	100
Self-employed..... (N = 114)	21	30	49	100
Upper white-collar*..... (N = 105)	8	25	67	100
Lower white-collar..... (N = 159)	12	28	60	100
Sales..... (N = 64)	16	33	51	100
Manual..... (N = 388)	25	36	39	100
Skilled..... (N = 195)	24	32	44	100
Semiskilled..... (N = 136)	23	37	40	100
Unskilled..... (N = 57)	35	44	21	100

*Includes business executives and other high-status white-collar jobs.

job. If we examine this table, a clear pattern emerges—the larger the community of orientation, the higher the status of the job held in San Francisco. Sixty-seven per cent of the business executives and upper white-collar workers grew up in large cities (250,000 or over in population) as compared with 60 per cent of the lower white-collar workers, 51 per cent of the sales personnel, 44 per cent of the skilled, 40 per cent of the semiskilled, and 21

per cent of the unskilled. These data suggest that migration from rural areas and smaller communities to metropolitan centers is playing the same role in ordering people in the occupational structure that immigration once played.

The deviations from the above trend lie mainly in two groups, the self-employed and the professionals. Other data in this study suggest that the deviation of the self-employed is related

TABLE 3. RELATIONSHIP BETWEEN OCCUPATIONS OF FATHERS AND SONS,
BY TYPE OF COMMUNITY OF ORIENTATION

Son's present job	Father's occupation*				
	Professional, self-employed, and business executives	White-collar and sales	Manual— skilled	Manual— semiskilled and unskilled	Farm
<i>Percentage distribution of respondents</i>					
<i>Community of orientation—farm, rural-nonfarm, and urban under 250,000</i>					
Manual	31	37	65	54	61
Nonmanual	69	63	35	46	39
All	100	100	100	100	100
	(N = 115)	(N = 30)	(N = 97)	(N = 55)	(N = 147)
<i>Community of orientation—urban, 250,000 and over</i>					
Manual	28	21	43	50	52
Nonmanual	72	79	57	50	48
All	100	100	100	100	100
	(N = 106)	(N = 52)	(N = 106)	(N = 70)	(N = 33)

*These categories differ from those for present job (Table 2). The data on father's occupation did not permit distinguishing between upper and lower white-collar jobs but did make it possible to separate business executives, who have been grouped here with professionals and the self-employed.

to the unique position that self-employment plays in our society.⁴ The self-employed have the most heterogeneous occupational career of any group in the sample. Many of them have had unskilled and semiskilled jobs previous to entering business for themselves. Of all the nonmanual occupations, this group contains the largest number of former manual and farm workers. The data also indicate that self-employment is the principal means of upward mobility for manual workers and the less educated, while the better-educated nonmanual workers tend to move up the occupational ladder within the bureaucracy of large-scale organizations. Owning a business, therefore, is the pattern of upward mobility of the lower-class migrants. If they do not enter self-employment, they tend to remain in lower-status manual jobs.

The professionals, on the other hand,

present a different problem. Most professionals have spent their entire working career in this category. It is probable that many natives of small communities who become professionals leave their home town to go to the larger cities, where greater opportunity exists in their field. Thus, we find that size of community of orientation is related to occupational position within the ranks of industry and large-scale organization. The smaller the community of school-age training, the more obstacles the individual is likely to encounter in his attempt to be upward-mobile within bureaucratic structures.

The hypothesis that the larger the community of orientation of individuals living in metropolitan areas, the more successfully mobile they will be may be tested directly by examining the difference between the occupations of the respondents and those of their fathers as an indicator of generational mobility, and the variations between the first jobs of the sample members and their present positions as a measure of intra-generational mobility, holding size of community of orienta-

⁴ See Seymour M. Lipset and Reinhard Bendix, "Social Mobility and Occupational Career Patterns, II, Social Mobility," *American Journal of Sociology* (Mar., 1952), pp. 497-499.

TABLE 4. RELATIONSHIP BETWEEN FIRST JOB AND PRESENT JOB, BY TYPE OF COMMUNITY OF ORIENTATION*

Present job	First job		
	Nonmanual	Manual	Farm
<i>Percentage distribution of respondents</i>			
<i>Community of orientation—farm</i>			
Nonmanual	60	29	40
Manual	40	71	60
All	100	100	100
	(N = 20)	(N = 62)	(N = 48)
<i>Community of orientation—rural-nonfarm, and urban under 250,000</i>			
Nonmanual	73	31	44
Manual	27	69	56
All	100	100	100
	(N = 94)	(N = 120)	(N = 9)
<i>Community of orientation—urban, 250,000 and over</i>			
Nonmanual	88	42	.....
Manual	12	58	.....
All	100	100	.....
	(N = 129)	(N = 158)	.....

*Includes only respondents aged 31 and over, in order to eliminate those men who have not been in the labor force for a considerable length of time.

tion constant in both cases. Tables 3 and 4 present the results of this analysis.

It is clear from the above tables that the larger the community in which one is brought up, the greater the likelihood that a man will be successfully upward-mobile, or conversely, the lower the possibility that he will fall in occupational status.⁵ There are many factors which underlie these relationships; some are discussed below. One important element, however, is the fact that educational opportunities are greater in larger cities and the potential rewards for educational attainment are more visible to those who live in larger cities while attending school. Natives of large cities are generally better educated than those living in smaller

TABLE 5. RELATIONSHIP BETWEEN COMMUNITY OF ORIENTATION AND EDUCATION

Years of schooling completed	Type of community of orientation		
	Farm (N = 167)	Rural-nonfarm, and urban under 250,000 (N = 306)	Urban, 250,000 and over (N = 434)
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
0-11	65	53	42
12	23	22	35
13+	12	25	23

communities, and the data indicate that the same differentials in educational backgrounds exist among residents of Oakland, when they are compared according to community of orientation (Table 5).

While the lower educational attainments of those residents of Oakland who grew up in smaller communities explain in large part why native metropolitan urbanites are more likely to

⁵ While the differences in some of the internal comparisons are slight and the number of cases in some of the cells is small, the fact that in each of the 10 possible comparisons the difference is in the direction indicated by the hypothesis suggests that the results have some validity.

TABLE 6. RELATIONSHIP BETWEEN COMMUNITY OF ORIENTATION AND OCCUPATION, WITH EDUCATION HELD CONSTANT

Present job	Type of community of orientation								
	Rural-farm			Rural-nonfarm and urban under 250,000			Urban, 250,000 and over		
	Years of schooling completed			Years of schooling completed			Years of schooling completed		
	0-11 (N = 157)	12 (N = 85)	13+ (N = 34)	0-11 (N = 108)	12 (N = 51)	13+ (N = 57)	0-11 (N = 186)	12 (N = 151)	13+ (N = 97)
Percentage distribution of respondents									
Nonmanual ..	36	49	79	36	63	79	50	72	82
Manual	64	51	21	64	37	21	50	28	18
All	100	100	100	100	100	100	100	100	100

attain nonmanual positions, it is interesting to note that, even when amount of education is held constant, more of the metropolitan residents hold nonmanual positions (Table 6).

Similar findings have been reported in European studies of social mobility. A recent Swedish study indicates clearly that the manual working class of Stockholm is primarily recruited from smaller urban communities and rural areas, while the majority of the sons of manual workers who grow up in the metropolis move up to the middle class.⁶ An early German study of the relationship between migration and social mobility also reported comparable results.⁷

INTERPRETATION

The cycle in which immigrants or migrants into large cities take over the lower-status positions while native urbanites move up in the occupational structure has been one of the more important processes underlying social mobility ever since cities began to expand

rapidly. It is this cycle which gives to cities their character of great mobility and ever-present change. Of those persons born and raised in cities, some are socially mobile and some, of course, are not. But they all tend to stay in the city (although they frequently move from one urban center to another). On the other hand, rural and small-town dwellers, if they move out of their parental status, are most likely to do so in a large city—while their more stable neighbors remain in their place of origin.⁸ Thus, more mobility takes place in the city than in the country or in small communities. But this conclusion still leaves unexplained the factors which facilitate the social mobility of native urbanites. While little research has been done which bears

⁶ See Gunnar Boalt, "Social Mobility in Stockholm" in *Transactions of the Second World Congress of Sociology*, Vol. II (London: International Sociological Association, 1954).

⁷ See Otto Ammon, *Die Gesellschaftsordnung und ihre natürlichen Grundlagen* (Jena: Verlag von Gustav Fischer, 1895), p. 145.

⁸ It may, indeed, be suggested that the more ambitious small town and city lower-class youth leave their home community for "greener pastures" in large cities. This hypothesis was in part validated by Scudder and Anderson, who compared the patterns of social mobility of "migrant" sons and those who remained at home with those of their fathers in a small Kentucky community. They found that "sons who migrate out of small or moderate-size communities are more likely to rise above their parents' occupational status than sons who remain in the home town." [Richard Scudder and C. Arnold Anderson, "Migration and Vertical Occupational Mobility," *American Sociological Review*, XIX (1954), pp. 329-334.]

directly on this problem, it is possible to suggest a number of processes which seem significant:

1. Greater social mobility in large urban centers as compared with smaller communities is inherent in the simple fact that metropolitan areas are characterized by a greater degree of specialization and a more complex division of labor than smaller communities. The economies that flow from specialization of function are able to take effect primarily in metropolitan centers. Consequently, increased size of community is related to the existence of a greater variety of positions. This means that there is a greater likelihood, on a chance or random basis alone, that people in large cities will move occupationally than will small-community dwellers.

2. Since the beginnings of the great urbanization and industrialization trends in the nineteenth century, cities have experienced considerable population and economic growth. They have far more than matched the expansion in total inhabitants and total economic activities of the countries in which they are found.⁹ This pattern of urban growth necessarily means that there are more new (and higher level) positions to be filled in metropolitan centers than in smaller and demographically more stable communities.

3. In spite of their rate of rapid growth, large cities have a lower birth rate than smaller communities and rural areas. Except for a brief period after World War II, cities over 100,000 in size in the United States have not been reproducing their population. Thus, migration to metropolitan areas not only accounts for the expansion of

urban population, but also fills in the gap created by low birth rates. And within urban society, the wealthier and higher-status socio-economic strata have the lowest reproduction rates. Consequently, variations in fertility rates help account for the maximization of social mobility in the city.¹⁰

The processes cited above clearly indicate why metropolitan areas have a higher rate of social mobility than smaller communities. They do not, however, suggest why men raised in large cities are more likely to be upward-mobile than migrants from smaller communities and rural areas. A few hypotheses may be suggested.

As was indicated earlier, lower-class individuals growing up in a large city are more likely to secure high education than their brethren in smaller communities. Almost every major city in the Western world has one or more universities, and natives of such communities can attend college or university while living at home. In addition, the simple fact of living in a community which has a college or university within it should mean that a school youth will be more aware of the possibilities and advantages of attending an institution of higher learning than will one who grows up some distance from a college. Metropolitan youth also benefit from the fact that the teaching staffs in their high schools are usually better paid and trained than those in smaller communities, and consequently are more likely to give their students more incentive to attend college.

Related to the greater propensity of urban youth to obtain higher education is the fact that they are more likely to be acquainted with the occupational possibilities which exist in such com-

⁹ Between 1870 and 1950, the proportion of the population living in cities over 100,000 jumped from 11 to 30 per cent in the U. S., from 5 to 27 per cent in Germany, from 28 to 38 per cent in Great Britain, and from 9 to 17 per cent (1946) in France.

¹⁰ See Pitirim Sorokin, *Social Mobility* (New York: Harper & Bros., 1927), pp. 346-360; and E. Sibley, "Some Demographic Clues to Stratification," *American Sociological Review*, VII (1942), pp. 324 f.

munities than will those who are raised in the occupationally less-heterogeneous smaller community. In re-analyzing the occupational choices of school youth in a number of German and Austrian cities, Lazarsfeld reported that "local variations in occupational choice are parallel to differences in the economic structure."¹¹ Thus, the larger the proportion of jobs in a given occupation in a city, the greater the number of 14-year-old school youth who desired to go into that occupation. Lazarsfeld interpreted this finding as follows:

... the nature of occupational choice is not determined primarily as an individual decision, but rather is a result of external influences. For the occupational impressions offered by daily life are proportional to the actual occupational distribution. The greater the number of metal workers, the more frequently will young people hear about it, and the greater will they be stimulated to choose it.¹²

Lower aspirational levels derived from their immediate class and community environment probably result in lower-class small-town or rural youth being less likely to try to obtain the education or skills which will permit them to be successfully upward-mobile. Thus, lower goals, plus the objectively greater difficulty in securing such training, result in lower-class youth not raised in a metropolitan center entering the labor market with greater handicaps than their big-city class-cousins. And in the labor market of the metropolitan centers, we find that working-class youth who are native urbanites are, in fact, more successful than migrants with similar class backgrounds.

The fact that urban origins are conducive to upward social mobility may help account for a phenomenon that has long puzzled students in this field:

the success of the Jews in moving out of lower-class occupations. As compared with any other visible social group, the Jews are the urbanites par excellence. The mobility patterns of the Jews, therefore, may in some part be a consequence of the fact that they are urban dwellers. Other natives of metropolitan areas are also successful in moving up, but this is observed as individual rather than group mobility.

CONCLUSIONS

This article has focused primarily on the ways in which the relative size of the community of orientation affects the training, opportunity, perceptions of the occupational structure, and occupational aspirations of individuals, and thus increases or decreases men's chances for an advantaged position in the occupational structure. It should be recognized, however, that variation in the size of community of orientation is only a special case of the variables which structure the horizons and opportunities of individuals. The sociological and psychological mechanisms involved are little different from the restrictions set by socio-economic origins, education, or ethnic background. When documenting the effect of each variable on a given behavior pattern, the sociologist is calling attention to the way in which an individual's potential behavior is limited or responsive to factors derivative from his location in the social structure. For example, Herbert H. Hyman pointed out that lower-status individuals are less likely to appreciate the value of higher education, or to recommend high-status jobs as occupation objectives to youth.¹³ The members of the lower strata not only are disadvantaged in terms of economic resources, but, like the residents

¹¹ Paul F. Lazarsfeld, *Jugend und Beruf* (Jena: C. Fischer, 1931), p. 13.

¹² *Loc. cit.*

¹³ See Herbert H. Hyman, "The Value Systems of Different Classes," in Reinhard Bendix and Seymour Martin Lipset (eds.), *Class, Status and Power* (Glencoe, Ill.: The Free Press, 1953), pp. 426-442.

of small communities, they take their cues about opportunity or education from their immediately visible social environment.¹⁴ Given the fact that

¹⁴ The question may be raised as to how these findings may be reconciled with those of Scudder and Anderson, who, as was previously noted, found that individuals who migrated from small communities were more mobile than those who remained. It is obvious that this study is not in conflict with that of Scudder and Anderson. The latter report more mobility by small-town out-migrants than natives, while the present study indicates greater mobility by large-city natives than by migrants from small towns. If these two studies are typical of patterns in the whole country, then they suggest the following relationship between social mobility and community of orientation: Those who grow up in small communities and remain in them are least

most people in that environment do not have high-status jobs or good educations, many of them are not even aware that these goals are attainable. Thus, a self-perpetuating cycle exists for men in less-privileged environments. The fact remains, however, that many men do break this cycle; and it is the further task of research in this and other areas of behavior to locate the sources of such "deviant" behavior.

mobile, those who leave these communities are more mobile than the stay-at-homes, while those who are socialized in metropolitan areas have the most opportunity for mobility. This pattern indicates why students of the status structure of small towns and cities report the existence of a relatively static structure. Unwittingly, they select for research the communities which are least representative of mobility trends in American society.

PROBLEMS OF EVALUATION RESEARCH

by Leo Silberman†

ABSTRACT

Research in the evaluation of field projects is a new subdivision of the social sciences employing techniques derived from statistics, history, anthropology, and econometrics. Its purpose is the objective measurement of change or growth, both the quantitative "aggregate" type and the process of maturation or "structural" growth. Concepts, techniques, principles, administrative problems, and machine aids are discussed. The paper refers frequently to the United Nations and its Specialized Agencies, which are at present the bodies most actively calling for evaluation specialists to guide their field staffs and Technical Assistance programs.

DELIMITING THE CONCEPT

"Evaluation" is a novel concept which very rapidly has made the rounds of social-work agencies and is now engaging the attention of organizations active in the international field. In its short career, it has been interpreted in a number of divergent ways. Sometimes no more than a standardized form of reporting is meant—thus robbing the notion of any intellectual content; but usually there is a genuine search for theory, techniques, and criteria, so that the social scientist called upon to evaluate a field program must do more than use his *ad hoc* ingenuity, garnished with a few impressive statistics. His is a specialized craft. In some respects, he functions as an accountant, as a "business" advisor on the procedures which the field force has adopted; his statistical and structural analyses recall what is best and broadly scientific in the scientific management movement. Evaluation studies of this kind have been executed or scheduled by the United Nations or its Specialized Agencies in the field of fundamental education, rural betterment, resettlement, exchange of persons—in fact, in the whole area of social development. That the United Nations—and especially the Technical Assistance departments—have been particularly desirous of having their work

inspected, overhauled, and realigned, in the light of the best possible advice, is no accident. Pioneering new forms of international mutual aid, working outside any specific national tradition, employing a heterogeneous staff trained in many different disciplines, they require new instruments to validate their operations. The Marshall Plan and its successors, the European Productivity Administration, and the Inter-American Union have similar problems and are tackling them similarly with the help of "evaluation experts."

Sufficient experience has been gathered to present a discussion of the key concepts and to make suggestions for agreement on them and the procedures to be adopted. They can be tentative only, but the author has sat on a number of committees grappling with the purposes, the need, and the scope of evaluation, and has seen a sample of returning experts to encourage him in the belief that the proposals represent a fair consensus.

"Evaluation" should be used in a strictly technical sense. It deals with a field experiment *during the course of its operation*. An expert in the field will take the terms of reference of the project as his own terms of reference. He is not, in his capacity as "evaluator," a policy maker or, as they are called in United Nations circles, a "program specialist." The *ex-ante* efforts of making a fair assessment of the

†Balliol College, Oxford, England; at present visiting the University of Chicago.

needs of a community should be expressed by the term "appraisal." Likewise, the *ex-post* or final verdict belongs to a "court of inquiry," a commission which may advise on the winding up or the continuation of the program. "Evaluation" becomes a piece of research undertaken somewhere midway in the proceedings, after the program has been given a chance of proving itself for two or three years and when corrective action may improve its efficiency.

To be effective, the evaluation report should not be undertaken too soon or too late in the course of the project. In the fashionable jargon of our day, it should supply "feed-back" information, such as profit-and-loss accounts or market and opinion studies provide for commercial undertakings. Acting like a thermostat, it gives off the right kind of signal, so that switches can, more or less automatically, be made in good time; we might call it, provisionally, the "cybernetics" of Technical Assistance and similar allied programs.¹ Even when no adjustments prove necessary, the work of the evaluating research worker is useful. He makes counter readings which will guide the pilot. As every airman knows, when landing his craft there can be no perception of space without the perception of a continuous background sur-

face. Evaluation establishes periodically a datum line against which progress can be measured; it gives the desirable orientation. Its case was made out some years ago by Kurt Lewin:

If we cannot judge whether an action has led forward or backward, if we have no criteria of evaluating the relation between effort and achievement, then there is nothing to prevent us from making the connection, and so encourage the wrong work habits. Realistic fact finding and evaluation are a prerequisite of any learning.²

GROWTH—THE SUBJECT MATTER OF EVALUATION

Technical Assistance and similarly inspired work are designed to stimulate and facilitate growth—i.e., they should remove obstacles to desired change in countries which regard themselves to be in one or more respects "underdeveloped" by modern standards, and call upon the United Nations to assist them in overcoming these lags. The process of growth, as we observe it daily in nature and in individuals, forms the practical object lesson for the new subdivision of the social sciences. Biologists, historians, and engineers are familiar with the problems of growth. Economists and sociologists, under the impulse of the discussions initiated by Technical Assistance, are devoting more and more attention to social and economic growth.³ Governments nowadays carefully study the contingent growth of different sectors of the economy, lest imbalances endanger the foreign trade mechanisms, full

¹ "Cybernetics" is a term first used in 1947 but already extremely popular, and now, retrospectively, applied to work much older than Wiener's experiments and discussion, which brought it to general notice. The term refers to the field of control and communication theory and especially to the artifacts using electronic computing devices. Such artifacts can (a) receive, store, and send information; (b) react to changes in their own "universe" of operation or to messages about the state of the artifacts; (c) "reason" deductively from experimental trials; and (d) vary their own behavior in trial-and-error, "goal seeking" behavior. Cf. D. M. MacKay, "Mindlike Behaviour of Machines," *British Journal of Philosophy of Science*, 1:4 (Edinburgh, 1952).

² K. Lewin, "Frontiers of Group Dynamics," *Human Relations*, 1:2 (London, 1947), p. 150.

³ "Dynamics will specifically be concerned with the effects of continuing changes and with rates of change in the values that have been determined The determinant in a dynamic system will not be the existence of a certain expectation of a once-over change in that expectation but a change of a rate of expectations."—R. F. Harrod, *Towards a Dynamic Economics* (London: Macmillan, 1952), p. 8.

employment, the credit apparatus, and political stability. The growth and decay of entire civilizations also furnish the theme of philosophical researches of breath-taking sweep, the popularity of which proves that the dynamic problems of social life are much in the public mind.

Two types of growth must immediately be distinguished. First, there is the type of growth which can be expressed quantitatively and measured by iterative means. Secondly, there is internal rearrangement, the process of maturing, as when a butterfly emerges from its chrysalis. To give a name to the two types, we may speak of the first as *aggregate growth* and of the second as *structural growth*. The first type usually can be represented in a life table as a life-and-death process from which future growth can be extrapolated, under certain assumptions. The second type refers to the "meaning" of a phenomenon.

Aggregate and structural growth imply different analyses, but they are frequently related as short-run and long-run processes. Ultimately, all structural growth can be expressed in quantitative parameters; vice versa, aggregate growth, by changing the statistical dimensions, also includes non-measurable but relevant features. When learning a language, we memorize new words—our new vocabulary is evidence of aggregate growth; at the same time, we begin to appreciate idiomatic use and the specific genius of the foreign tongue so different in many ways from our own: there is a structural change in our linguistic sense. Aggregate growth forms the core of applied statistical analysis such as was formulated in the agricultural experiments and psychological explorations of the learning process and intelligence. Modern structural analysis has profited by economic theory investigating the institutional reforms needed to achieve full

employment — those measures which will prevent the economy from settling down, as it shows an inclination of doing, below the level of optimum utilization of its capacities. Also the study of the "absorptive" powers of a culture to incorporate permanently the right adjusting mechanisms which will assure full desired growth to all the participants in the culture—the kind of study undertaken by G. Myrdal on the American Negro—is this kind of structural growth inquiry.

Because of its precision and seemingly perfectly objective character, aggregate growth is relatively easy to evaluate. This does not mean that it is in every case the main aspect of the program to study. One sympathizes with the director of a fundamental education project complaining of the spurious "cabbage counting" in which research workers have indulged under the plea of evaluating a scheme. It recalled to him the scholastic minds which have done so much damage in education. Because certain skills can be measured by examinations and tests, the scholastics hold that an education is good if many pupils pass the tests; they leave character training out of consideration and disregard the value of free inquiry, the fruits of which may only be gauged later in life. The *aggregate* approach commands approval where technical improvements, actuarial-type welfare schemes, and rapid economic progress are the main objectives. The *structural* approach is more appropriate where new insights are to be engendered and the human-relations (psychiatric) orientation informs the social program. At least, both can be mutually fructifying. Psychoanalysts, until recently, dogmatically denied that their concepts or therapy could be statistically evaluated. Environmental changes which lent themselves to statistical measurement appeared to them superficial, short-lived, or downright

evasive.⁴ This extreme position is found more rarely today. The structural analysts couch their assessments in such form that in time they can be verified by accumulating observations. They build models, the variables of which can be measured. The elements are functionally related, so that, on the basis of a general "body of belief" axioms, dimensions and indicator values can be sorted out, matched, and compared. Hence with the passage of time, the number of measurable indexes will multiply. The genius of the contemporary painter cannot be measured—certainly public opinion is no criterion; but if representative groups of competent critics in later generations are equally moved by him, his value and contribution to the growth of painting are assured. So Van Gogh dies poor and neglected; but his reproductions sell by the hundred thousand, and, in a manner of speaking, we all see cornfields and sunflowers through his eyes.

THE ANALYSIS OF AGGREGATION

A literacy campaign, an insecticide experiment, a Marshall Plan engineering team attached to a European factory are fairly assessed by aggregate measurements. The target, however far-reaching the effects, is limited in scope. The achievements of a program of fundamental education, the use of an exchange-of-persons program, or the effects of a report to an industry written by a productivity team which has visited the United States occupy the structural analyst and require the historical and anthropological method for their elucidation.

Basically, *aggregate analysis* is a *matching operation*. The same circumscribed group of individuals is studied in two time periods and, preferably, compared with a control group. A new

medical treatment is validated in this manner; all outside influences which might have a bearing on the results are either directly controlled or matched by the "untreated" control group. The differences between the parameters of the treated group and the control must be statistically significant to establish the value of the treatment. The differences between Period I and Period II, and/or between the treated and the control groups, must outweigh the probability of chance results; conventionally we demand odds greater than 1:20. Use is made of sampling methods to economize on the size of the experimental groups.

Period I

Control Group A
Group B observed *before*
treatment

Period II

Control Group A
Group B observed *after*
treatment

Statistical tools invoked in evaluational work of this type can be classified under two heads: (1) the *analysis of dependence*—the analysis of variance and covariance, regressions and confluence analysis, and discriminant analysis; and (2) the *analysis of interdependence*—correlation techniques, association and component analysis, and factor analysis. The corpus of statistical methods is very large and is continuously being enriched by new devices and insights. However, the further we proceed into the nature of the statistically interpreted universe, the clearer our notions about our underlying ideas and relationships. Because statistics is an advanced science, we can group the study under the two headings and with Kendall, its leading modern exponent, state:

[In interdependence analysis] we are interested in how a group of variates are related among themselves, no one being

⁴O. Pollak, *Social Science and Psychotherapy* (New York: Russell Sage Foundation, 1952).

marked by the conditions of the problem as of greater prior importance than the others; whereas in the analysis of dependence we are interested in how a certain specified group (the dependent variates) depends on the others.⁵

Factor analysis reduces the multiplicity of uniformities and correlations in nature or society to a much smaller number of factors. But such is the status of this powerful technique that at the conclusion of the analysis it is still possible to recover the values of the original observations, which is not possible with non-factorial methods.

Statistics has taught us to control and standardize the field of observation. More "significant" figures can often be found for homogeneous substrata of a sampled population. People with similarities of home background or temperament or entering the experimental situation with the same state of medically verifiable health show up subtle effects of treatment, which a heterogeneous group would obscure.⁶ Aggregate analysis relies on the apperception of the organic subgroupings, each of which makes its positive (characteristic birth) or negative (characteristic death) contribution to the total process. Widely differing processes have been shown to follow relatively simple mathematical functions, such as the compound interest or exponential curves, expressing unrestricted growth. The logistic and the normal ogive are functions of growth converging to an asymptotic level. Time series often contain cyclical data, slightly blurred by "disturbance variables."⁷

The more experienced and talented the analyst of aggregate growth, the more swiftly and convincingly will he

single out the methods applicable to the situation in which he is called upon to report. Frequently, he will be able to find a new theoretical abstraction of the situation and apply mathematical ideas which hitherto seemed irrelevant to evaluation. However, his chief practical usefulness to the director of a scheme, working in the field, is his articulation of a few, strictly defined, measurable indicator values which can be compiled on the basis of counts and samples, swiftly, inexpensively, periodically, and without disturbing the smooth working of the project during these "stock taking" phases.

The variables which indicate growth are "isolates," abstractions from the total body of data, and are of three kinds:

Simple indexes are akin to temperature readings, and they are entered on a temperature chart. The number of newspapers bought since the inception of a literacy campaign may be an index of increasing reading habits; the ratio of doctors to population, an index of medical care; the divorce rate, an index of family stability. These indexes are acceptable as legitimate shorthand descriptions only if, *inter alia*, low circulation figures are not more convincingly explained by bad distribution methods or unsatisfactory content of the newspapers; if two districts are comparable as to roads, size, and contour, and are equally favorable to good health, then alone are we able to focus on the number of physicians in the two areas as indicative of the health service; if divorce laws are of similar severity or liberality and legal costs are not disparate, then we can compare divorce rates of two countries and make pronouncements on the marriage tie.

⁵ M. G. Kendall, "Factor Analysis," *Journal of the Royal Statistical Society*, B:12 (London, 1950), p. 60.

⁶ G. E. P. Box and K. B. Wilson, "On Experimental Attainment of Optimum Conditions," *ibid.*, B:13.

⁷ Cf. K. E. Boulding, "Towards a General Theory of Growth," *Canadian Journal of*

Economics and Political Science, Vol. 21 (Toronto, 1953), pp. 327-340. Also, H. Hart, "Logistic Social Trends," *American Journal of Sociology*, Vol. 50 (Chicago, 1945), pp. 337-352.

Often used are more composite indexes, made up of a variety of observations, each suitably weighted. For instance, the "social class of a British town" can be so assessed. We compound (a) the proportion of persons voting Conservative in the last election; (b) the proportion of households having private telephones; (c) the number of private cars per head of population; (d) the number of illegitimate births per 1,000 live births; (e) various sickness and mortality rates; and (f) data on ratable values.⁸ A "Westernization index"—based on such items as the degree to which immigrant Indians in an island like Mauritius are adopting the Creole language in place of their native Indian language and the Catholic religion for Hinduism, the number who are changing their names to make them sound French, and the number who are dressing like Europeans and embellishing their parlors with pictures with "Western" motifs—was used to measure cultural changes and the weights given to each variable were validated by factor analysis.⁹ The "poverty line," another frequently used composite index, prices the minimum needs of households of different size and age and sex composition. Those who earn less than the cost of a calculated minimum regarded as essential for physical health and social acceptability are "in want." Rowntree, the important chocolate industrialist of York and a universally respected social scientist, found at the turn of the century that 30 per cent of the working population of his town were "in want"; a generation later, investigating the same households, he

found 14 per cent "in want"; and in 1950, 3 per cent.¹⁰

The third type of measure is the index of universal domain. A list of such indexes has already been published by the UNESCO Committee of Experts on the Measurement of Living Standards. National income figures, the mean expectation of life, and the composition of the labor force are used to summarize relevant economic, demographic, or occupational intelligence.

In some cases, multiple correlation analysis can find short cuts. With its help, associated simple indexes can replace the composite or universal indexes. Thus, in Mauritius, income was correlated with the composite social class index; the number of beds in a household per "equivalent adult" was correlated with Westernization; and the (easily ascertained) figures on the importation of bicycles or sewing machines have proved to be a good index of (much more complicated) changes in the national income. Still it will be true that quite simple measures require argument, and that the experimental design is often only a second-stage instrument after a good deal is known and bias can be controlled.

Data not supplied in quantitative form can nevertheless be given a physical dimension. Observations of behavior, reactions of individuals in different group situations or responding to tasks or pictures of deliberate vagueness into which they are asked to read a meaning (thematic apperception tests), questionnaires, and "depth interviews" by psychiatric workers supply information which, at any rate in principle, can be paired or marked off on a continuum. Scaling technique turns a series of qualitative facts into a quantitative series. Besides the statistical questions, there are semantic

⁸ L. T. Wilkins, "Estimates of the Social Class of Towns," *Applied Statistics*, I:1 (London, 1952).

⁹ L. Silberman, "The Social Survey of Port Louis (Mauritius)," *Review of the International Institute of Statistics*, 21:1/2 (The Hague, 1955).

¹⁰ B. Seebohm Rowntree, *Poverty and the Welfare State* (London: Longmans Green, 1951).

questions raised by scaling. The norm—the midpoint of the continuum—must be the same in the minds of all subjects. In the field of officers selection, for example, some commanding officers rank all their men as “excellent” while others, given to understatement, say “they’re not a bad lot.” Filter questions, as they are known, elicit the norm in the respondent’s mind. For research must not neglect the use of common sense. It may seem absurd to mention such an obvious fact, but, in evaluating a relief program, one well-established agency compared the number of times a client would complain of distress before relief was given, and after relief. This impressively designated “distress-relief quotient” was easily and reliably scored. Unfortunately, no validity could be given to it, since those who were known to have been most aided by the welfare workers were often those most agitated and disgruntled.¹¹ Explorations in the field of exchange of persons (Germans and Japanese visiting the United States, etc.) have shown that there are always some who “on principle” are enthusiastic about everything, and others who are negative even in the most favorable circumstances. The program must be evaluated by its effect on more elastic and empirical persons. The form of the “response function” is too often taken for granted. The structural elements in analysis are glossed over, often a grave disservice to statistics.

THE ANALYSIS OF STRUCTURE

The timing of a project and the opinions surrounding it may be of greater importance to its final outcome than any particular “treatment” employed in its course. Only historical analysis can finally elucidate how much of the general *Zeitgeist* must be incorporated

as a constituent feature of the experiment. To what extent did the publication of *The Wealth of Nations* hasten the coming of free trade in Britain? How much did *Uncle Tom’s Cabin* contribute to the cause of slave emancipation in America? Documentary evidence is not lacking in papers, private journals, the correspondence of policy makers, the speeches, and even the terminology used by the contestants. The statistician wisely avoids any use of causative language. He has outlawed the use of correlational techniques in time series analysis. In evaluation, however, statistics must be fitted into a causally linked system of variables. To do this is the work of the structural analyst.

Structural analysis is a work of disentanglement, of a disaggregation of complex factors. Ideally, the factors are not only described in general terms but the weight of their contribution can be given—if not in cardinal, then in ordinal numbers. The structural analyst sketches the shape of the system and the general path of its growth curve and the resulting configuration. As D’Arcy Thompson has so elegantly shown, structure is largely a product of the circumstances of growth: An organism growing uniformly in all directions will be spherical; one which grows on one side more than on the other will twist into some sort of spiral; another which has added to one dimension rather than to another will be “long.”¹²

Technically, structural analysis advances by a series of approximations. A model is roughed out and then made increasingly precise and diagnostic. With every step the schematic picture, giving a simplified version of the structure of reality, is more clearly identified.

¹¹ Cf. D. G. French, *An Approach to Measuring Results in Social Work* (New York: Columbia University Press, 1952). This is a pioneer work in evaluating social work.

¹² Sir D’Arcy W. Thompson, *On Growth and Form* (Cambridge, England: Cambridge University Press, 1942).

Factors proved to be functionally related, sharing the full history of the structure, are said to be "endogenous"; others are "exogenous," or disturbance variables. Some domains change more rapidly than others; the latter are said to be "lagged" variables. These terms are in common use in econometrics; their adoption into "evaluational science" is an obvious procedure. Other concepts may find favor. Indeed, the studies sponsored by the Cowles Commission and many of the mathematical techniques associated with the RAND Corporation should prove valuable.

The structural analyst aims at a master plan or model which represents the salient features of the experiment and which expresses them in a form at once abstract and endowed with measurable features, comparable subdivisions, and clearly enunciated "syntactical" relationships. Four distinct phases characterize the modelmaker's work:

(a) He first constructs a frame of reference. Giving the main "dimensions" within which the project may be said to operate, he simultaneously traces the social sectors which will be affected, each in its own way. The number which it will be practical to distinguish will not be so great as to become unmanageable, nor so small as to distort the complexity of reality. All the forces which are brought to bear in the course of the project on these sectors will be described. The sectors form a spectrum. Some of them will be found to fit rather loosely and can be shifted easily; elsewhere the innovations will meet with resistance. The constraining forces will constitute the limits within which the scheme will have to work. The sectors and the "hierarchy of mutability" characterizing them give a preliminary model; this phase is tantamount to a "spacing out" of the entire problem. It identifies the number and kind of variables which then are further analyzed.

(b) Once identified, the variables are given a more exact description. Each substratum is given a specific profile, and typical historical sequences are studied. Often use can be made of the ideas on experimental design as developed by the statisticians. More frequently, the overlap between substructures of different cultures is used to interpret the meaning of perplexing sequences or to establish the "equations" which express them in symbolic form.

(c) A system of equations is set up in which the variables are neatly sorted out as either endogenous or exogenous. The exogenous factors are now studied. Proposals are made as to how, in the master plan, the various elements can be made to dovetail harmoniously. The "distance" between master plan and objective reality is emphasized.

(d) The "social space" in which the project functions is defined, this time with a larger number of detailed observations. By successive approximations in which the above steps are repeated several times, the model is made more realistic and more simple. The "most efficient blending" of variables is established with the help of linear programming.

A few words on each of these phases will give the lay reader a firmer understanding of the techniques employed. "Disaggregation" has become a practical necessity in spheres where, until quite recently, we were satisfied with the information given by indexes of universal domain. As more and more countries assembled data and calculated national income statistics, the very use to which they were put required a more careful study of the entire frame of reference about which they were saying so much. What does it mean if the average income of a Haitian is \$50? No one in the United States can live on \$50 per annum. A primitive country has different dimensions. Colin Clark,

who shortly before the war, with his pioneer work on national income, inaugurated the cross-cultural comparisons has now subdivided his international unit, based on the purchasing power of the dollar. He is no longer comparing primitive and advanced economies by the same token. He uses for underdeveloped territories an oriental unit, based on the rupee. Stone and his school speak of the necessity of a "social accounting" approach. Stone has articulated the British economy into various sectors (industry, households, government, Britain in its relation to the external world); the flow of economic activity and its changes in time—with the changes in economic policy or terms of trade—provide us with a measure of structural change. The work of Leontief for the American economy, his so-called input-output matrixes, constitutes another fruitful attempt at disaggregation. Every transaction is shown as a receivable and a payable; every product or payment is noted as an output of one sector and as an input of another sector. In some countries several distinct accounts are kept for the economy—operating, appropriating, capital, and reserve accounts. As analysts of aggregation become self-critical they develop structural interests. They find uses for long-neglected schematic devices such as the *tableaux économiques* of the eighteenth-century physiocrats. Social scientists working in the field of evaluation must elaborate *tableaux sociologiques* and make the econometrician's work more generally ascertainable to all the disciplines comprising the social sciences.

The use of similarities of overlapping structures has been well exemplified in the history of linguistics. A quotation from a logician interested in structural analyses shows their method of work in a manner relevant to our discussion:

What provides the lexicographer [of "Kalaba," an unknown language] with an entering wedge is the fact that there are many basic features of men's ways of conceptualizing their environment, of breaking the world down into things which are common to all cultures The obvious first moves in picking up some initial Kalaba vocabulary are at bottom a matter of exploiting the overlap of our cultures. From this nucleus he works outwards, ever more fallibly and conjecturally, by a series of clues and hunches. Thus he begins with a fund of correlations of Kalaba sentences with English sentences at the level where our cultures meet. Most of these sentences classify conspicuously segregated objects. Then he breaks these Kalaba sentences down into short component elements, and makes tentative English translations. On this basis, he frames hypotheses as to the English translations of new combinations in the direct way. He tests his hypotheses as best he can by making further observations and keeping an eye out for conflicts He comes to turn increasingly to that last refuge of all scientists, the appeal to internal simplicity of his growing system.¹²

The system of equations, about which it is not difficult to speak in the abstract and with which (using sometimes rather arbitrary assumptions) the econometrician works, is not quite so easily given operative meaning. The author recalls his sociological studies in Nairobi, the capital of Kenya, which very carefully assessed the rates of growth of that economy, the importance of the capital city, its economic role, population growth by urbanization and by reproduction of the inhabitants, the balance of the races, the modifications of political framework in the context of a changing world. A master plan was built up on the basis of clearly formulated assumptions, principles, and planning needs.¹⁴ Ev-

¹² W. V. O. Quine, *From the Logical Point of View* (Cambridge, Mass.: Harvard University Press, 1953), pp. 30-36.

¹⁴ W. L. Thornton White, L. Silberman, and R. Anderson, *Nairobi, Masterplan for a Colonial Capital* (London: Her Majesty's Stationery Office, 1948).

everything found a place; and for some years economic and demographic projections seemed to be borne out by events. Then came Mau Mau. About the possibility of this tragedy, which has now disfigured the colony for more than three years, the readers of our book on Nairobi were never warned. Had we been more skilled in assessing the "process substitution functions," we should not have been taken by surprise. Of late, the government of Uganda has been facing opposition from the Baganda, who object to the speed with which the government is pushing ahead with industrialization. The planners were not warned by our own blindness in the neighboring colony. A system has its own homeostatic adjustments; it insists on its own pace in digesting the presented innovating impulses; it is the business of the analyst to define the "crisis threshold" and of the policy maker to mitigate the resistances. By analogy, with statistics, we must become "limit-conscious." Twenty-five years ago, Sir Ronald Fisher, by his seminal investigations into the experimental design of agricultural research, defined the "fiducial" error margin within which we must express and control our research. Structural analysis is concerned with the "capacity limits" of a system. The variables sorted out for endogenous and exogenous origin must be tested for their tendency to lag and to generate forceful reactions. Some observers of Kenya and Uganda now tell us that plentiful warning was given from certain quarters, but that the optimistic atmosphere of the early postwar period—a period of new planning hopes and a laudable desire to make up for the lost time of the slothful prewar years "which the locust hath eaten"—obscured these warnings. Structural analysis is continuously engaged in a reassessment of its own analysis.

Mention has been made of linear or mathematical programming. The tools are simple, as can be seen from the popular and the technical literature.¹³ The purpose of this new branch of mathematics is to find the best blend or the "efficiency point" of two linear relationships subject to certain constraints. The "simplex" method of computation permits practical calculations and the use of machine aids. The statement of programming problems in linear terms does, in practice, little violence to the realistic situation.

A situation is converted into a programming problem as soon as we concentrate on the chief actors, if we conceive the agents as producers who have to choose between different "processes" or activities. There are several ways of teaching people to read and write or, elsewhere, to grow potatoes. Any specific process is defined by listing the resources required in labor, land, capital, etc., to produce a convenient unit of the activity. The producer can draw up a table (matrix) showing the amount of each resource 1, 2 n needed to produce one unit of each process 1, 2, m.

The entry in the i th row and the j th column, say a_{ij} , is the amount of the i th resource required to produce one unit of the j th process. We assume that the input-output relations are linear and additive, for example that a combination of k_1 units of process 1, k_2 units of process 2, , and k_m units of process m , would require $(k_1 a_{11} + k_2 a_{12} + \dots + k_m a_{1m})$ units of the i th resource. We assume further, that the producer knows (or can estimate) the expected net income to be obtained from a unit of each of the m processes. We may call these incomes r_1, r_2, \dots, r_m . Finally, we assume the producer has a limited amount

¹³ R. Dorfman, "Mathematical or Linear Programming," *American Economic Review*, Dec., 1953. Also, R. A. King, "Some Applications of Activity Analysis in Agricultural Economics," *Journal of Farm Economics*, Dec., 1953.

of each of the n resources. We label these amounts s_1, s_2, \dots, s_n .¹⁶

The producer's problem, given the values a_{ij} , r_j and s_i , is to determine the most profitable, feasible combination of processes. To be feasible, a combination must meet the two conditions: (1) It must not require more of any resource than is available; and (2) it must not include a negative amount of any process. Expanding one process at the expense of the other until the best blend is achieved is the essence of programming, a systematic way of viewing all kinds of activities under an economic calculus, which can be widely (i.e., sociologically) interpreted as occasion demands. The technique provides a logic which the research worker can use in all kinds of evaluation problems. It is much more realistic and inclusive than the old marginal analysis with which economists have been operating so long. It is closely related to the theory of games and set theory, now finding all kinds of applications in the theory of organization.

ADMINISTRATIVE SET-UP AND MACHINE AIDS

The United Nations would do a service if it subsidized a systematic exploration of the available methods of research, properly validated under field conditions. The evaluators, once they had agreed on the procedure, could run schools for executive staff in the field, who would become, in time, their own evaluators. The resident administrator is particularly interested in the answers to the following questions: (a) To what extent has the entire staff understood the terms of reference of the project? To what extent is collaboration assured? To what extent is the community in which the work is performed familiar with the objectives

of the projects? Is there growing endorsement of the objectives by the local population? (b) What social indexes can serve as periodical pointer readings to demonstrate the usefulness of the project to the sponsoring agency and government and to the local population? (c) Can the project be set up so that it can continuously reshuffle the constituent elements until the best blend is found?

For some time to come, evaluators must be recruited from outside the organizations desiring this form of "audit." Eventually the Technical Assistance Board, which is the coordinating body bringing officers of the various Specialized Agencies and the United Nations together, might have a few specialists attached to it; or, alternatively, the regional committees of the United Nations might recruit such experts, since some of them have a team of supporting statisticians. In certain circumstances, local universities may be cooperative. Many institutions of higher learning, as well as statistical bodies, have modern calculating machinery and surveyors trained to collect the quantitative data. A central United Nations statistical center at Amsterdam has long been discussed.

Great strides have recently been made in the type of machinery available. Hitherto, the Hollerith types of machine have done most of the computational work. They work efficiently and swiftly. A sorter will classify data punched on a Hollerith card, at the rate of 24,000 an hour. Each card can carry eighty items of information. The tabulator prints the information and can do so for 9,000 cards an hour. The multiplier calculates preset functions and can handle up to 1,800 calculations an hour. Other machines collate the information contained on two sets of cards. Nowadays, however, we are served by electronic machines which work much faster. Numbers are represented by chains of pulses passing

¹⁶ F. V. Waugh and G. L. Burrows, "A Short Cut to Linear Programming," *Econometrica*, XXIII:1 (New Haven, 1955), pp. 30-31.

through electrical circuits at electronic speeds. Moreover, these machines are equipped with storage devices, or "memories," which hold chains of pulses or computations until they are required at a later stage of the operation. At present these machines are still very costly and their maintenance no small item of expense. Much cheaper are electrical analogue circuits. They are set up to translate numerical quantities into physical quantities of so many amperes and ohms. Suitably placed measuring devices give us the readings of the quantities present at different parts of the system, or the best blend. The circuits represent the system, an economy or a social situation, and according to the resistances found in different parts of the system to a novel connection, diverse realistic social and economic problems can be evaluated. The graphic demonstration of an economy by means of hydraulic or electric analogues has been tried in a number of countries.

A NOTE OF WARNING

The human problems arising in evaluation are not the least difficult to resolve. Machine aids are not available to produce answers. The very stress on "techniques" may obscure the human qualifications of the evaluator and his ability to combine science and administration, specialist advice and policy. If the project team finds that it cannot employ the evaluational findings, scientific inferences may easily be represented as interference. The objectivity of the evaluator will appear to the unpersuaded as a case—if one might coin a phrase—of "misplaced abstractness." There certainly is a danger of forcing upon international work a standardized service in the interest of scientific comparability, but no less perilous are concessions to fumbling and complacency among project leaders.

To some, the work of the evaluator—confined as it is to technical issues—

will appear as another proof of the accusation leveled against the scientist that he is over-concerned with techniques, to the exclusion of values; evaluation is then another case of "a-valuation" so frequently and mistakenly lauded in the positivistic tradition of science. There may indeed be a number of cases when the evaluator, facing a demonstrably stultifying series of terms of reference, should be permitted to criticize these and not feel tied to his role as an advisor on the implementation of these terms of reference.

In general, however, the evaluator is a technician whose position should not be inflated. It will be powerful enough though seemingly confined to the elaboration of charts, tables, and formulas, and a critique of the instruments used by the workers in the field. The following was written by a statistician attached to the British Ministry of Aircraft Production during the war. His revelation may come to many as a surprise, but he lucidly shows why the scientist inevitably commands great authority in any planning organization:

Ironically the more difficult it was to make a statistical estimate and the greater the margin of error in the final figure used, the greater the veneration with which it was treated In calculating labour requirements quite arbitrary assumptions had to be made, the validity of which could not be rationally explained or disputed. Once a figure was put forward therefore, it soon became accepted as the "agreed figure" since none was able by rational argument to demonstrate that it was wrong and suggest a better figure to replace it The pseudo-scientific atmosphere which the use of charts and statistics created gave great power to the statisticians. For it was fairly easy by the manipulation of statistics and charts to "prove" a particular case, and the statisticians soon came to realise that many of the officials not used to handling figures were both impressed by this manipulative power and incapable of acquiring it themselves. The department or directorate which had a skilled statistician al-

ways had a great initial advantage in any interdepartmental or interdirectorate disputes. And any statistician who was concerned with issues of policy was bound to find himself, sooner or later, selecting and manipulating statistics in such a way as to guide policy along the lines which he had decided, on quite general grounds, were the right ones. Attempts were made to avoid this danger, by separating the collection and issue of statistics from decisions and discussions of policy. But such attempts invariably failed.¹⁷

The education of the project leaders in the critical appreciation of evalua-

tion must be accompanied by an ethical disciplining of the technical advisors, i.e., the human values of the project must be articulated. We may say that a "Rotational Golden Rule" of evaluation is to focus attention now on the problems which the evaluator has "spaced out," now on the problems which by definition of his work he leaves untouched, in the same way that the sound evaluation scheme concentrates now on aggregate growth and the indexes measuring it, now on structural growth and its analysis. The techniques themselves, since they are applied to dynamic phenomena, are subject to continuous revision.

¹⁷ E. Devons, *Planning in Practice* (Cambridge, England: Cambridge University Press, 1950), pp. 159, 163.

STABILITY OF FARMERS' ATTITUDES IN A CONFLICT SITUATION INVOLVING FARMER-HUNTER RELATIONS*

by LaMar T. Empey and Walter L. Slocum†

ABSTRACT

A before-and-after analysis of farmers' attitudes in a conflict situation involving farmer-hunter relations revealed that most farmers were not greatly influenced by a group organized to influence opinion and action, despite a vigorous campaign by the group and even though the farmers found themselves in an ambiguous, not previously experienced situation. Farm ownership and previous traumatic experience with hunters were the only characteristics of farmers found to be associated with decisions to restrict hunting. The data seem to confirm the hypothesis that actual experience with a situation tends to reduce prejudice against it.

The present findings are compared with some findings of Lazarsfeld *et al.* For the present sample it is concluded that (1) attitudes, if defined as internalized predispositions to act, tend to be stable, although verbalized responses tend to be unstable; (2) changes in attitudes involved, in many cases, the activation of previous experiences; (3) predispositions to act were not necessarily more typical of individuals in whom cross-pressures operate; and (4) opinion-leaders, either self-appointed or otherwise, did not influence the decisions of most farmers.

This paper presents a "before-and-after" analysis of attitudes and attitude-stability in a conflict situation. It is concerned with the verbal and overt behavior reactions of a sample of farmers to a surprise announcement that, for the first time, deer hunting was to be permitted on their farms. Specifically, the purpose of making this analysis is fourfold: (1) to discover to what extent the decisions of farmers to restrict hunting on their farms were influenced by a group which was organized to persuade all of them to prohibit hunting during the 1953 hunting season; (2) to ascertain relationships between relevant social characteristics and decisions by farmers to restrict hunting on their farms; (3) to test the hypothesis that actual experience with a situation (in this case a deer season) which is consciously created by a social-action group will tend to re-

duce prejudice against it; (4) to determine whether some of the generalizations by Lazarsfeld, Berelson, and Gaudet concerning short-range changes in attitudes and behavior are supported by the empirical data of the present situation.

THE SITUATION

Early in the summer of 1953, the Washington State Department of Game announced plans for a three-day deer season to be held, in October, in Whitman County. Traditionally, the county has been a large producer of upland game (pheasants, partridges, and quail), but this was the first county-wide deer season ever scheduled. It aroused immediate protest from some farmers.

Generally, farmers in Whitman County are relatively prosperous; the average size of their farms is 671 acres, and the average value is \$85,713. They had permitted bird hunting on their farms in the past, but in this case some seemed to feel that the use of rifles for deer would constitute a danger to human and animal life which

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†The State College of Washington, Pullman, Wash.

could not be tolerated.¹ In a matter of days after the season was announced, a group consisting principally of farmers and stockmen was organized to oppose the season. In addition, one of the two main county newspapers chose to headline the announcement, and to give a great deal of publicity to the views of the opposition group.²

The initial goal announced by the group was to force the State Game Commission to cancel the deer season. In the attempt to accomplish this purpose, at least 35 petitions were circulated throughout the county for farmers to sign if they opposed the season. The action threatened by the group and by all farmers who signed the petition was that their farms would be posted against bird hunting as well as deer hunting if the Game Commission decided to go ahead with its plans for the deer season. Extensive publicity was given to the arguments of the group by the county newspapers. Despite this opposition, the Game Commission decided to go ahead with its plans.

When the Commission's decision was made known, the opposition group held further meetings and intensified its efforts to get as much of the county as possible posted against all hunting. Several steps were taken in order to make pressure felt: (1) the group elected officers and appointed local committeemen in different parts of the county; (2) a state senator from Whitman County met with the Game Commissioners to make county sentiments known; (3) a newspaper poll was conducted by two newspapers which pur-

ported to show that more than nine out of every ten persons in the county opposed the season; (4) circulation of petitions was stepped up; and (5) a meeting of farmers was scheduled for early in September to organize further opposition and to try to insure extensive posting of farms. On October 8, 1953, three days before the opening of the season, the organization announced through the newspaper that 50 per cent of the land in Whitman County would be completely closed to hunting. Despite this threat to its efforts to promote good farmer-hunter relations, the State Game Commission remained adamant. The deer season was held according to schedule.

At the time the storm of protest broke over the proposed deer season, the authors were just beginning to interview a sample of farmers on their attitudes and practices relative to the production of game and to public hunting on their farms. The questionnaire was already designed to determine pertinent background characteristics, past experiences with hunters, posting practices, and plans for the future. To obtain information on the controversy, it was necessary only to add a few more questions to the schedule. And, since the situation provided an excellent opportunity to obtain information on "before-and-after" practices and attitudes, it was decided to interview farmers again after the deer season was over.

METHODOLOGY

Responses were obtained from a sample of 190 farmers—approximately 10 per cent of all the farm operators in Whitman County who, in 1952, operated farms larger than 10 acres. Operators were selected at random by taking every tenth name from the geographically subdivided files of the county office of the Production and Marketing Administration. The initial interviews were conducted between

¹ For a complete picture of the situation, see W. L. Slocum and L. T. Empey, *The Role of the Farmer in the Production and Hunting of Upland Game*, Washington AES Bull. 552 (State College of Washington, Pullman, 1954).

² Information pertaining to the activities of the organized group was obtained from the *Colfax Gazette-Commoner*, a weekly newspaper published at Colfax, Wash.

June 18 and August 6, 1953; responses were obtained from every farmer in the sample.³ The second, or follow-up, interviews were made during December, 1953, and were conducted mainly by telephone. In the follow-up interviews, responses were obtained from 180 farmers, 95 per cent of the sample. There were no refusals but it proved impossible to locate the remaining 10 farmers in the limited time available.⁴

Methods used in the analysis of before-and-after data during World War II by the Research Branch, Information and Education Division of the War Department, were helpful in designing the analysis.⁵ The test of significance used in the evaluation of changes in decisions is a formula for the critical ratio presented by McNemar, which takes into account the correlation found in before-and-after responses from the same population.⁶

³ This high rate of response is believed to be due to two principal factors: (1) the fact that farmer-hunter relationships are of concern to all farmers in the county and (2) the methodology of the study. Each farmer in the sample was notified by letter that he would be asked to participate. This was done about a week prior to the interview. Attached to the letter was a one-page outline which covered the following points: purposes of the study, sponsorship, name of the interviewer, and the probable uses to be made of the data. Following this, all but five respondents were contacted by telephone, and a definite appointment was arranged for each interview.

⁴ Review of data reflecting the characteristics of those who were not re-interviewed revealed no systematic overrepresentation with respect to the size of farm operated, age of operator, tenure status of operator, or other items. Consequently, it is concluded that the returns are reasonably representative.

⁵ Carl I. Hovland, Arthur A. Lumsdaine, and Fred D. Sheffield, *Experiments on Mass Communication (Studies in Social Psychology in World War II, Vol. III)* (Princeton, N. J.: Princeton University Press, 1949).

⁶ Quinn McNemar, *Psychological Statistics* (New York: John Wiley & Sons, Inc., 1949), pp. 77-82.

Chi-square was the test used for other kinds of data.

INFLUENCE OF THE CAMPAIGN ON FARMERS' OPINIONS AND ACTIONS

Probably the most notable change in the hunting situation, from a hunter's viewpoint, was the increase, from 1952 to 1953, in the number of farmers who posted all or part of their land.⁷ The proportion of farmers who posted in 1952 was 29 per cent; in 1953, the figure rose to 40 per cent.⁸ These findings suggest that most of the additional posting was due to the deer season. No other plausible explanation is readily available; damages by hunters during the 1952 bird season were reported by only 14 per cent of all farmers (21 per cent of those who placed further restrictions) and no farmers reported any dangerous incidents in 1952 involving their personal safety. Yet, if one accepts the replies of farmers on the question of whether or not the deer season was responsible for the increased posting, he is not warranted in attributing the major responsibility to the deer season. Only a little more than half of those who increased their restrictions in 1953 acknowledged that this action was taken because of the impending deer season.

Previous research suggests that in an ambiguous situation, where an individual's previous experience does not clearly provide an adequate definition of the situation, he is inclined to be highly susceptible to suggestion⁹ and tends to identify with those who seem

⁷ The increase was statistically significant; $P < .01$.

⁸ These figures do not mean that 29 and 40 per cent of the land was completely closed to hunting in 1952 and 1953. Some farmers restricted only parts of their land. Actually only 10 per cent was completely closed in 1952, and 20 per cent in 1953.

⁹ Hadley Cantril, *The Psychology of Social Movements* (New York: John Wiley & Sons, Inc., 1941), pp. 69-71.

to represent his interests.¹⁰ Since the organized opposition group was made up principally of farmers, one would expect that the campaign conducted by that group would affirmatively influence some decisions either directly or indirectly, as it was through this campaign that issues were dramatized. However, relatively few farmers were willing to acknowledge that the campaign had influenced their attitudes or decisions either affirmatively or negatively. Of the 180 farmers,

75% said that they had not been influenced by the campaign;

16% said that they had been influenced *affirmatively* (toward favoring the group);

7% said that they had been influenced *negatively* (toward opposing the group);

2% were *undecided* as to whether or not they had been influenced.

Another indication of the reluctance to give the group credit for influence was that almost two-thirds (62 per cent) of those who tightened restrictions in 1953 denied that they had been influenced.

With reference to the few farmers who did acknowledge influence, however, it should be noted that an influence on opinion was not necessarily the same as influence on decision. Of those farmers who said they were influenced in favor of the position taken by the organized group, only 37 per cent were sufficiently motivated to increase their restrictions. On the other hand, of those who said they were influenced negatively by the group, only one did anything to encourage hunting; and, in fact, some of them increased their posting. It appears, then, that

any decision changing which occurred was based upon a complex of factors.

It should be noted that, even though there was an increase in posting, the effect on farmer-hunter relations was not severe. All who wanted to hunt were able to do so. The organized group failed to approach its initial goal of persuading all farmers to prohibit hunting during the 1953 season; only 22 per cent of the farmers in the sample took increased restrictive action in 1954. Since only 20 per cent of the land was completely closed to hunting in 1953 (compared with 10 per cent in 1952), the influence of the group was greatly overestimated by its officers when they declared, just prior to the season, that 50 per cent of the land would be completely closed.

RELATIONSHIP OF FARMER CHARACTERISTICS AND ACTION

Information was obtained from each farmer in the sample with respect to age, size of family, membership in groups having some interest in farmer-hunter relationships, rural-urban residence, history, tenure status, previous traumatic experiences with hunters, and whether or not the farmer hunted.

Only two of these factors, tenure status and previous traumatic experience with hunters, proved to be significantly associated with increased restrictions on hunting. Those who imposed more restrictions included more owners than renters¹¹ and a higher proportion of those who had suffered significant damage from hunters in the past than those who had not.¹²

EFFECT OF EXPERIENCE ON ACTION

If prejudice is defined as "judgments made on the basis of inaccurate or insufficient knowledge," it can be said that prejudice against a deer season existed among 53 per cent of the farm-

¹⁰ Thomas E. Coffin, "Some Conditions of Suggestion and Suggestibility: A Study of Certain Attitudinal and Situational Factors Influencing the Process of Suggestion," *Psychological Monographs*, Vol. 53, No. 241 (1941), pp. 49-62.

¹¹ $P < .05$; δ (coefficient of contingency) = .24.

¹² $P < .05$; $\delta = .29$.

ers in this study. Therefore, it would seem important to ascertain whether or not actual experience with a season would tend to reduce prejudice against it.

The literature on the subject contains conflicting views. On the one hand, it is argued that any new action program should be undertaken only after definite steps have been taken to educate and gain the cooperation of the population involved.¹³ On the other hand, it is acknowledged that gaining such cooperation is not always possible and that, when necessary, firm and decisive action should be taken by leaders without the cooperation of the people involved.¹⁴

In the present study, personnel of the Washington State Department of Game, who had purposely created the situation without gaining the cooperation of the farmers involved, were contacted for their impressions on this subject. They said that their experience indicated that extensive damage seldom occurred, and, that once a season was held, opposition to it would diminish. They felt that many of the farmers' fears were "fears of the unknown," and that experience would tend to remove them.

Post-hunt interviews with farmers in the sample revealed that none of them had experienced any damage as a result of the deer season, nor had any of them heard of anyone else experiencing any damage. Furthermore, there appeared to be a large shift in opinion about the season. Figure 1 shows that, whereas 53 per cent of the 180 farmers were unfavorable to the season prior to its being held, only 24 per cent expressed an unfavorable

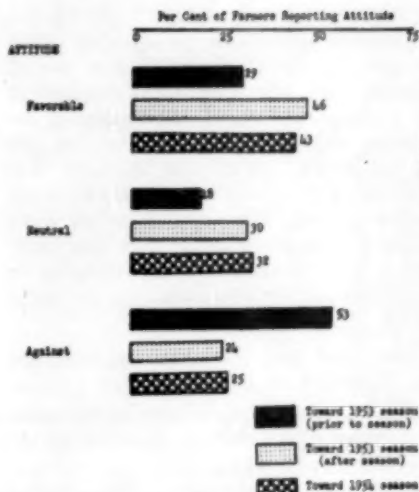


FIGURE 1.
OPINIONS CONCERNING DEER SEASONS

opinion toward it after it was over. In addition, opinions relative to a deer season in 1954 also showed a considerable change when compared with opinions prior to the 1953 season (Figure 1). More than four out of ten farmers (43 per cent) now favored another season, and only 25 per cent were opposed to it; the remainder were neutral. The changes in opinions in both of these cases were highly significant.¹⁵

On the basis of these findings, then, it would seem that the stand taken by the Washington State Department of Game was vindicated. Actual experience with the situation did seem to reduce prejudice against it. If, however, they had been wrong in their prediction that no extensive damage would occur, the opposite effect might have been created.

PRESENT FINDINGS COMPARED WITH LAZARSFELD'S

Lazarsfeld and associates studied the factors involved in political decision

¹³ Arthur E. Morgan, *The Small Community* (New York: Harper & Bros., 1942), chap. X; and United States Department of Agriculture, *Extension Experiences Around the World* (Washington, D. C., 1949), pp. 192-196.

¹⁴ Morgan, *op. cit.*, p. 173.

¹⁵ Changes in opinions before and after 1953 season: $CR = 4.78$. Changes in opinions comparing 1953 with 1954: $CR = 4.65$.

making; data were obtained through successive interviews with panels of voters during the course of and subsequent to the 1940 and 1944 presidential campaigns. On the basis of their analysis of the 1940 study, Lazarsfeld, Berelson, and Gaudet advanced "... a number of generalizations which [they state] should be relevant to any research concerned with short-range changes in attitude or behavior."¹⁶ The data of the present study permit examination of four of their generalizations:¹⁷

1. *Attitudes tend to be stable.* On the basis of this study, confirmation or rejection of this generalization would depend upon the definition of attitude. If attitudes are defined as being synonymous with verbalized responses, then the present data fail to support the generalization. Within a period of a few months there was a large fluctuation in the verbalized beliefs (attitudes) of these farmers. Prior to the season, over half of the farmers were opposed to having a deer hunt; verbal opposition was pronounced. By the time it was over, the position was almost reversed. Afterward, less than a fourth of the group were opposed to the deer season, and 43 per cent were in favor of a season in 1954.

On the other hand, if attitude refers to an internalized predisposition which leads to or influences concrete action, then there are some grounds for a qualified acceptance of the generalization.¹⁸ It is true that a high proportion voiced opposition to the deer season before it was held, but, when the time

for action arrived, the great bulk of farmers reaffirmed their 1952 actions by making few changes in their policies about hunting. Of the farmers interviewed, only 22 per cent changed their 1952 decisions in a restrictive manner. On this basis, the generalization would be tentatively accepted.

2. *Changes in attitude sometimes involve the activation of previous experiences.* The data of the present study tend to support this generalization. Farmers who reported previous traumatic experiences with hunters were more inclined to place further restrictions on hunting than those who did not report such experiences. For example, there was a significant difference in restrictive action between those who had suffered some damage from hunters during the previous twelve months and those who had not.¹⁹

3. *Predispositions to change are more typical of individuals in whom cross-pressures operate.* This generalization may have general validity, but the data of the present study do not seem consistent with it. Fifty-five per cent of the farmers were also hunters, so that they were subjected to cross-pressures in terms of their interests as farmers as contrasted with their interests as hunters. As might be expected, they indicated more opposition to the pressure group than did the non-hunting farmers. There was a significant difference between the two groups as to whether they were positively or negatively influenced by the actions of the group.²⁰ On the other hand, the actions of the hunter-farmers seem to belie their statements. Hunter-farmers were much more likely to have increased restriction against hunters than the non-hunting farmers.²¹

The data do not permit an explanation of this paradox. However, they

¹⁶ Paul F. Lazarsfeld, Bernard Berelson, and Hazel Gaudet, *People's Choice; How the Voter Makes Up His Mind in a Presidential Campaign* (New York: Duell, Sloan, and Pearce, 1944).

¹⁷ *Ibid.*, pp. xx-xxv.

¹⁸ Although a definition of attitude is not explicitly given by Lazarsfeld et al., this latter definition seems to approximate theirs most closely. [See Lazarsfeld, *op. cit.*, p. xx.]

¹⁹ $P < .05$.

²⁰ $P < .01$.

²¹ $P < .05$.

do seem to illustrate the point made previously that verbalizations and behavior in this study were often markedly inconsistent.

4. *Opinion leaders mediate between mass media and other people; thus opinion change based upon propaganda is ordinarily a two-step process.* The evidence suggests that most of those who made restrictive changes did not accept members of the organized group, or anyone else for that matter, in the role of opinion leaders on the issue involved. As noted previously, 62 per cent of the decision-changers denied any influence by the organized group. Furthermore, only 19 per cent of all farmers interviewed acknowledged that their attitudes on farmer-hunter relationships had been influenced by the experiences and attitudes of any individuals with whom they associated. There was no significant difference between the decision-changers and others on responses to this question.

The pattern of farmers' responses here and throughout the study generally supports the stereotype of the farmer as a self-reliant individual who makes his own decisions with a minimum of dependence upon opinion leaders. It would be hazardous, however, for extension workers or others who work with farmers to accept this result as meaning that all farmers are largely insensitive to opinion leaders. Some previous research has indicated that, in some types of decision making, many farmers rely on the experiences and attitudes of others.²³ Nevertheless, because of the discrepancy between the findings of this and previous studies, it would seem important that further research be undertaken to discover what qualitative factors are involved in the rejection by farmers of influence on one matter and their acceptance of influence on another.

²³ Cf. E. A. Wilkening, *Acceptance of Improved Farm Practices in Three Coastal Plain Counties, North Carolina* (Tech. Bull. 98 (Raleigh, May, 1952).

FAMILISM IN RURAL SASKATCHEWAN*

by Courtney B. Cleland†

ABSTRACT

The concept of *familism* suggested certain questions to be asked about 160 Saskatchewan farm families, in which the mothers were interviewed in 1953. The goal was to detect possible changes in the familistic pattern which had been assumed to be more characteristic of pioneer days. Rough measures were developed for six aspects.

No consistent pattern of interrelationship was revealed among the measured aspects. Grain-farm families ranked high on integration. The relatively prosperous families were the ones most interested in continuity on the land. The younger families displayed division of labor that was most sex- and age-related. These are examples of tentative conclusions.

The question is raised, whether a situation is emerging which is actually more favorable to certain of the familistic aspects than was the pioneer culture.

Most sociologists have some acquaintance with the concept *familism*, which refers to a social system in which behavior and values are dominated by family, rather than individual, interests. It is an ideal construct that is employed in such standard works as Sorokin, Zimmerman, and Galpin's *A Systematic Source Book in Rural Sociology*, Burgess and Locke's *The Family*, and Calhoun's *A Social History of the American Family*.¹ Recent efforts to measure familism are exemplified by the research of Wilkening (in Wisconsin) and Rohwer (in Iowa).²

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†North Dakota Agricultural College, Fargo, N. D.

¹ P. A. Sorokin, Carle C. Zimmerman, and Charles J. Galpin, *A Systematic Source Book in Rural Sociology* (Minneapolis: Univ. of Minnesota Press, 1931), Vol. II, pp. 41-48; Ernest W. Burgess and Harvey J. Locke, *The Family* (New York: American Book Co., 1945), pp. 89-92; Arthur W. Calhoun, *A Social History of the American Family* (New York: The Barnes and Noble Co., Inc., 1945).

² Eugene A. Wilkening, "Change in Farm Technology as Related to Familism, Family

For purposes of this inquiry, the concept was important as a device for suggesting certain questions to be asked about farm families in Saskatchewan, Canada. The work reported here was part of a larger study for the Royal Commission on Agriculture and Rural Life of that province.³ Conducting studies on subjects ranging from local government to movement of people, the commission was interested in the general problem of change. In matters of technology, the "new look" in agriculture had been apparent enough in that province. Had there also been important changes in family organization?

A modest attempt to find an answer was made by interviewing a sample of 160 farm wives during the summer of 1953. If data had been collected for a similar sample back in 1913, one would have had a bench mark for precisely estimating family change in the 40-year interim. Since this had not been

Decision Making, and Family Integration," *American Sociological Review*, XIX:1 (Feb., 1954), pp. 29-37; Robert A. Rohwer, *Family Factors in Tenure Experience*, Iowa AES Bull. 375 (Ames, Iowa, 1950).

³ Royal Commission on Agriculture and Rural Life, *Home and Family in Rural Saskatchewan* (Regina: Government of Saskatchewan), scheduled for publication in 1956.

done, use was made of the concept *familism* on the assumption that, in general, farm families of an earlier day—i.e., of a less urbanized and more isolated rural society—reflected familistic patterns more truly than do farm families of today. No proof of this statement could be submitted, except for scattered evidence of a historical and literary sort; it was simply an assumption.

The theoretical details of this earlier family pattern were spelled out more definitely in six aspects: (1) an emphasis upon family integration (the extent of shared activities was taken as an indicator of this), (2) a wide range of kinship contacts, (3) family continuity on the land, (4) family division of labor along age and sex lines, (5) the father-centered nature of decision making, and (6) a father-centered allocation of money income within the family. It might be noted that the latter two aspects are as reflective of patriarchy as of familism, indicating the overlap of these two concepts.

INDEXES FOR ASPECTS OF FAMILISM

For each aspect a crude index was constructed. Scores for each index could range between 0 and 100, the high scores indicating families closest to the averred traditional pattern for that aspect and the low scores representing the most non-familistic performances. This ordering of the families for each aspect was the chief purpose of each index, not the provision of numerical measures as such.

Selection of the items to compose each index was arbitrary, based both upon the ideal construct of familism and upon the limited available data pertaining to pioneer Saskatchewan families. An item analysis made for each index provided evidence of at least a common dimension running through the items making up each index. Until validity and reliability are more firmly established, however, the

indexes must be labeled as highly tentative.

The index scores computed for the 160 families confirmed the expectation that these families could be arranged along a continuum, from those least like the propounded familistic type to those most like it, in regard to each of the six specific characteristics. For five of the six indexes there were families scoring as low as 0; and for four out of the six, some families scored as high as 100. Thus, virtually the whole range of possible variation measurable by the indexes was represented. From inspection of the data, however, the families appeared to be most like the theoretical model in the aspects of family continuity and integration and least like it as to father-centered decision making.

ASSOCIATION WITH OTHER FACTORS

More important was the finding that variations in the index scores were associated with other basic factors that differentiate families in rural Saskatchewan (Table 1). Differences among mean index scores were tested for the following seven classifications:

1. Population trend in area of residence:
 - a. Extreme depopulation.
 - b. Moderate depopulation.
 - c. Stable population.
 - d. Increasing population.
2. Type of farm:
 - a. Livestock specialty.
 - b. Mixed.
 - c. Grain specialty.
 - d. Straight grain.
3. Size of farm:
 - a. Quarter section or less.
.....[to].....
 - f. Six quarters or more.
4. Income:
 - a. Extremely low.
.....[to].....
 - f. Very high.

TABLE 1. VARIANCE RATIOS FOR DIFFERENCES AMONG MEAN SCORES OF FAMILY INDEXES WITHIN SEVEN CLASSIFICATIONS, SAMPLE OF 160 FARM FAMILIES, SASKATCHEWAN, 1953

Classifications	Indexes					
	Family integration	Kinship contacts	Family continuity	Father-centered decision making	Income allocation	Division of labor
Population-trend areas.....	*2.68	1.48	.31	1.19	.34	.50
Type of farm.....	*2.41	.46	1.27	.29	2.27	*2.84
Size of farm.....	.41	1.01	.86	.32	.70	.56
Income level.....	1.66	.58	*2.61	.16	1.81	1.71
Stage of family life cycle...	**5.75	.70	.54	.86	.33	*3.22
Language differential.....	.02	.05	1.55	.50	1.07	2.74
Distance from town.....	.49	.87	2.42	1.42	1.41	.35

*Significant at the 5-per-cent level.

**Significant at the 1-per-cent level.

5. Family life-cycle stage:
 - a. Child-bearing stage.
 - b. Child-rearing stage.
 - c. Older-child stage.
6. Language spoken in the home:
 - a. English exclusively.
 - b. All other situations.
7. Distance from farm to nearest town:
 - a. Under 5 miles.
 - b. 6 to 10 miles.
 - c. More than 10 miles.

For each classification, the null hypothesis was that there were no differences among the groupings. Analysis of variance (the *F*-test) was the statistical tool used. In each case of a significant variance ratio, the *t*-test was also applied in order to determine whether one, two, or all of the groupings were the source of statistical significance. In addition, a test was made for homogeneity of variance (the *F*-test), to insure that a basic assumption for the use of variance ratios was being met.

With regard to population-trend areas, there was a significant relationship in the case of the family-integra-

tion index.* The 40 families from the moderately depopulated areas had integration scores which averaged about 7 to 12 points lower than in the other areas (significant at the 5-per-cent level, or less, as are other differences reported here). How can such a difference be explained? Perhaps families in the moderately depopulated areas reflected a relatively greater state of social disruption in their communities; they were still in the difficult process of adjustment. By contrast, in the areas of extreme depopulation the integration scores averaged higher, presumably because the less well integrated families had already left those areas and the remaining families were perhaps further along in their adjust-

*The seven items composing the tentative family integration index were: (1) whole family goes into town as a group, (2) family stays together as a group when it gets to town, (3) family volunteers information on two or more types of activity its members do as a group (or makes the claim, "We do everything as a family group"), (4) wife indicates pride in observation of Christmas as a special family event, (5) other holidays are also celebrated as family events, (6) special celebrations (a cake baked, a party, or some other family way of marking the event) are held for birthdays of children, (7) special celebrations are held for birthdays of adults.

ments, as disclosed by the extent of family-shared activities.

The type of farm was also a factor important for family integration. The families on straight-grain and grain-specialty farms scored significantly higher on this index than did the families in mixed farming and livestock production. This finding may run contrary to expectation, if one believes that families in mixed farming display the greatest sharing of activities. It should be recalled, however, that the items in this index concern activities in which the family members can participate as a group. Evidently some family group activities, particularly those of a recreational nature which take place away from the farm, are more feasible with a grain-farming operation.

The stage of the family life cycle had the expected effect upon the integration index. The mean score for families in the older-child stage was around 15 points lower than for those in the two earlier stages (a statistically significant difference). This finding is useful mainly as a rough check on the validity of the index, for it is obvious that, when a majority of children are in their teens, the family typically no longer does as many things together as a group.

The data on kinship contacts suggests that they are still very important in rural Saskatchewan. Seventy-nine per cent of the families had relatives living within 10 miles, and they visited back and forth weekly, if not more often. The custom was to visit with relatives more than with nonrelatives. The typical farm wife said that, in the event of trouble, she would rather ask a relative than a nonrelative for help.

Perhaps one important change has occurred in the caring for relatives. Only 26 out of 160 families reported relatives living in the household, and only 13 families helped out older relatives not living on the farm—probably

a reflection of the development of old-age pensions and other programs of public assistance.

It also may be true that the more distant cousins and in-laws have been eliminated from the ranks of those to whom special obligations are due; this point was not specifically tested. Still, there was really little evidence from this sample to support the modern view that "the trend is to treat one's relatives as one would treat anyone else—in terms of one's own reactions to their personalities rather than in response to the status they occupy."⁵

Statistical analysis revealed no significant relationship between index scores for kinship contacts⁶ and any of the seven classifications. Evidently kinship contacts were so all-pervasive that differences in these variables affected them little. For this sample, relatives were about as important everywhere and at all levels.

CONTINUITY IN FARMING

Certainly much of the character of the familistic pattern is related to the continuity of the family in the occupation of farming. This continuity continued to be one of the chief aims for many of the families in the present study. Out of 160 farm wives, 91 wanted their own children to stay in farming, and almost as many believed

⁵ John W. Bennett and Melvin M. Tumin, *Social Life* (New York: Alfred A. Knopf, Inc., 1948), p. 557.

⁶ The seven items composing the tentative index of kinship contacts were: (1) family has relatives located less than 10 miles away, (2) family visits with relatives at least weekly or oftener, (3) family visits more with relatives than with non-relatives, (4) equipment or help exchanged more often with relatives than with non-relatives, (5) in times of trouble, wife would rather ask relative than friend for help, (6) relatives are living in respondent's household, (7) family helps out older relatives not living on the farm. Of these items, the last one failed to discriminate significantly between the high-scoring and the low-scoring groups on the total index.

that at least some of their children would stay. The majority of the adults had received help from their own parents to get started in farming, and 73 per cent of them feel they should do the same for their own children. Elsewhere it has been said that the "family property system is changing and dissolving." For example, parents no longer invariably pass on property to children. This generalization may apply to the more urbanized family type, but farm families in this sample do not plan to cut loose from the older pattern in that respect.

Somehow a baby who could grow up to be a tinker, tailor, or some other kind of urban worker grows up to be a Saskatchewan farmer much like his father. Just how does the family accomplish this? The answer is partly in terms of the learning which takes place in the family and partly in terms of the family's economic capacity to help. As revealed in another Royal Commission study, apparently many families do an effective job of implanting favorable attitudes toward farming.⁷

In this study, the level of income was related to family continuity—the only measured family aspect with which income was significantly associated. When the families were divided into six income groups, it was found that the higher the income, the higher the mean score on the family continuity index.⁸ At the next-to-the-highest in-

come level, the families averaged significantly greater scores than the families in other income groups. The traditional pattern—in which the couple received parental help, want their own children to stay in farming, and believe that some of them will—thus appeared to be most associated with relative prosperity. There was no significant difference in family continuity scores for the classifications, other than income.

In constructing an index for family labor,¹⁰ it had been assumed that the more traditional type of family displayed a clear-cut division of labor along age and sex lines. Significant differences in index scores were noted for the type-of-farm and family-cycle classifications. Apparently the division of labor which puts the children to work around the farm at an early age and which defines quite exactly what is considered "women's work" and "girls' work" was more characteristic of the straight-grain farms than of the other types. It was also found that families in the older-child stage of the family

similarly by the parents), (3) wife wants her own children to stay in farming, (4) wife believes some of the children will stay in farming, (5) wife feels parents should help children to get started in farming. Of these items, the last one failed to discriminate significantly between the high-scoring and the low-scoring groups on the total index.

¹⁰ The four items composing the tentative index of family labor were: (1) wife does no outside work except for gardening, (2) children help around farm at an early age (8 years or younger), (3) girls do only "girls' work" (unless there are no boys), (4) boys do only "boys' work" (unless there are no girls). Of these items, the last one failed to discriminate significantly between the high-scoring and the low-scoring groups on the total index. ("Boys' work" included all outside work except gardening and gathering eggs. "Girls' work" included all inside work but not carrying wood, water, and ashes; it also included work in the garden and gathering eggs. Feeding poultry was considered either boys' or girls' work.)

⁷ Willard Waller (as revised by Reuben Hill), *The Family* (New York: The Dryden Press, 1950), p. 13.

⁸ Royal Commission on Agriculture and Rural Life, *Movement of Farm People in Saskatchewan* (Regina: Government of Saskatchewan), scheduled for publication in 1956.

⁹ The five items composing the tentative family continuity index were: (1) couple received parental help to get started in farming, (2) they did not receive favored treatment over their brothers and sisters to get started in farming (the reasoning is that in the familistic pattern all children who want to go into farming are treated

life cycle had significantly lower scores than families in the child-bearing stage. As the children became older, the wife was more likely to do outside work. This may seem inconsistent unless it is explained in terms of the children's increasing school and social activities in their teens (and hence lesser availability for work) coupled with the mother's greater freedom from child care. Girls were also not as confined to only so-called "girls' work" in the older-child stage. Perhaps the older girl tended to join her parents in the fields or barn or developed an actual preference for working with machinery and herds.

The data gathered on decision making suggest that most families in the sample fell far short of the exceedingly patriarchal type. For only two kinds of decisions studied was the father indisputably the most influential family member in the majority of families—planting crops and buying machinery. For many types of decisions it was apparent that responsibility was shared by husband, wife, and even the children.

No significant differences within any of the classifications were noted for this index.¹¹ There was no evidence that decisions were more "father-centered" for certain types of farming, or on smaller farms, or among groupings within any of the classifications. If such was the case, this index was too

crude or the samples were too small to reveal them.

Financial affairs constituted one sphere in which the father tended somewhat to retain his traditional dominance. Eighty-four out of 160 wives in the study regarded the husband as THE income earner on the farm. The modern picture of the wife as chief purchasing agent for the family was not entirely supported by the data; it was customary for the husband or the older son to pay most of the bills for the family. Also confirmed was the substantial source of unpaid labor represented by the children. In very few of the families did the children receive a regular allowance or wage, and they were even less likely to own an animal or have property of their own. The index of income allocation,¹² like that for father-centered decision making, was not significantly related to any of the classifications.

RELATIONS AMONG INDEXES

An obvious question to raise is, "How do the various aspects of family organization hang together?" On a logical basis, one might predict, as a minimum, a positive association of kinship relations and family continuity, and father-centered decision making and income allocation. The characteristic of integration might be expected to be associated with either pair, depending upon whether it was ordinarily achieved by autocratic or other means. Likewise, the division of labor accord-

¹¹ Ten items compose the tentative index of decision making: the husband was the most influential family member for these eight items: (1) deciding what crops to plant, and when and where, (2) deciding to buy farm machinery, (3) deciding to buy appliances for the house, (4) deciding to borrow money, (5) deciding the amount to be given to church or charity, (6) giving children permission to go somewhere, (7) punishing the children, (8) giving children their spending money. The wife was the most influential family member for two items: (9) deciding to do redecorating in the house and (10) seeing that the children study their lessons.

¹² The five items composing the tentative index of income allocation were: (1) husband (or husband and older son) regarded as THE income earner on the farm, rather than "both parents" or the "whole family as a unit," (2) husband or son pays most of the bills for the family, (3) wife does not get a regular, dependable part of the farm income that she can budget for household and personal expenses, (4) children do not receive a regular money allowance or a specific wage tied to performance of particular tasks, (5) children do not have property of their own.

TABLE 2. CORRELATION COEFFICIENTS FOR PAIRS OF FAMILY INDEXES, SAMPLE OF 160 FARM FAMILIES, SASKATCHEWAN, 1953

Indexes	Indexes				
	Kinship contacts	Family continuity	Father-centered decision making	Income allocation	Division of labor
Family integration.....	.124	.114	-.070	-.026	-.020
Kinship contacts.....		.125	.081	-.006	-.059
Family continuity.....			.016	-.024	.054
Father-centered decision making.....				*.321	-.098
Income allocation.....					-.014

*Significant at the 1-per-cent level.

ing to age and sex lines might be associated with either pair.

Actually, the correlation coefficients among index scores showed that pairs of index scores varied together only to a very limited degree (Table 2). Out of 15 *r*'s among the various pairs of indexes, 11 hovered close to 0. Family characteristics, as measured by these indexes, were independent rather than associated in "clusters," in this sample, at least. For example, family integration was independent of father-centered decision making, with a correlation of only $-.07$. (Incidentally, this result might suggest the hypothesis that the democratic, rather than the autocratic, type of integration is holding sway.)

One exception to the general results was the predicted, though moderate, correlation ($+.32$, significant at the 1-per-cent level) between father-centered decision making and the male-dominated type of income allocation. No doubt this is explained by the common patriarchal elements running through these two indexes.

The only other correlations of even minor consequence were very low positive correlations among the indexes for integration, kinship contacts, and family continuity. Even these were not statistically significant at the usual 5- or 1-per-cent levels. But the fact that

they existed at all (in view of the general lack of correlation) and in the expected positive direction may be worth noting. With the limited research done in measurement of these family factors, it is difficult to judge what size of correlation is to be considered important in this field.

It should be stressed again that the indexes used in this study are tentative measures. They are supposed to reflect the extent to which pioneer, familistic patterns are reproduced in present-day families. If they are less than wholly reliable and valid, as is probable, that circumstance may mean that the indexes will indicate less in the way of interrelationship than is actually the case.

CONCLUSIONS

What statements, then, can be made about changes in the Saskatchewan farm family? Because of limitations with regard to the sample, the methodology, and perhaps also the basic assumption, only a few conclusions will be stated—these mostly by way of contriving new hypotheses.

It was assumed that pioneer families were familistic and patriarchal. If this assumption is sound, then one may be justified in making cautious statements about the direction of family change, if not the exact extent and rate of change. In general, aspects of the new

family pattern emerging in rural Saskatchewan vary in their deviation from the theoretical model. A given family might have very low index scores on some measured aspects, yet high scores on others, with no consistent pattern of interrelationship.

The following hypotheses appear warranted: Grain-farm families are the stronghold of traditional family characteristics as regards family integration and the division of labor among family members.¹³ In these aspects, the livestock and mixed-farm families may have changed most. In their degree of integration, families living in the areas of moderate depopulation have declined more than families in other areas. In general, the less prosperous a family is, the more change it is going to show from the familistic ideals of helping the next generation to continue on the land. Families with a majority of the children over the age of 15 have a division of labor that is less sex- and age-related than in the earlier family stages. Likewise, they cannot expect to be as well integrated as younger families.

Apparently the scope of contacts with relatives, the way in which income is allocated among family members, or the extent to which decisions are dominated by the father are not related to other basic family factors measured. More important in bringing about differential change in the assumed pioneer practices, as noted above, were the type of farming, the stage of the family life cycle, the population trend in the family's area of residence, and the level of income.

It is probable, too, that the farm family in Saskatchewan does not reflect the impact of agricultural change to the degree that Royal Commission studies

have shown for some other subjects of investigation. That farming practices yield to "rationo-scientific" thinking and values (as in mechanization) does not mean that the more "sacred" institution of the family will yield as quickly or to the same extent. Nor is the change to more urbanized modes of life a one-way ticket. Every such trend is bound to arouse a counter movement, as was evident from briefs submitted to the Royal Commission by such groups and organizations as the Roman Catholic Hierarchy, the Saskatchewan Homemakers Clubs, and the United Church of Canada.

LIMITATIONS

Conclusions have been stated as hypotheses, to underline their tentative nature pending future studies. It cannot be stressed too strongly that, in gathering field data to check the emerging characteristics of the farm family, the writer was limited by time and cost considerations to one small sample. This sample, while random within its restrictions, was drawn from a universe of 144 rural municipalities that were consistent in their population trend from 1931 to 1951. It was also limited to families in which at least one child between 6 and 18 years of age was in residence. These could be possible sources of bias. Therefore, one must resist the temptation to generalize too much. No doubt in years to come, as more interest develops in the measurement of family factors, more adequate samples and improved research techniques will provide a more reliable account of the developing situation.

Another limitation of the present study may be conceptual. The assumed strong familism of the earlier family may be open to doubt, despite the usefulness of this constructed type for framing the interview. Schooled in the *Gemeinschaft-Gesellschaft* concept and several others of that order, the sociol-

¹³ Taylor has made a similar observation for wheat areas of the United States. See Carl C. Taylor et al., *Rural Life in the United States* (New York: Alfred A. Knopf, Inc., 1949), p. 396.

ogist may forget that a set of ideas developed out of European experience may have less relevance for explaining what happened on this continent. Evidence that the pioneer Saskatchewan family closely approached the familistic type is actually rather scant. One could, in fact, reason that the goal of maintaining the farm and keeping it within the family lost importance on the frontier, where new land was readily available. Likewise, patriarchy in the family may have had unfavorable conditions for survival when the sons

could readily find cheap farms of their own, whereas now that land has become dear, the economic and emotional investment in it grows. Is there developing today in Saskatchewan a situation actually more favorable to certain of the familistic aspects than was the pioneer culture? Even though this question cannot be answered here, it seems worth raising. A research fraternity can become burdened with stereotypes which hamper rather than help research.

INTRA-FAMILY COMMUNICATION AND FERTILITY PLANNING IN PUERTO RICO*

by Reuben Hill, Kurt Back, and J. Mayone Stycos†

ABSTRACT

This paper reports on two phases of the family project in Puerto Rico—the considerations and decisions relative to choosing the unit of study and conceptual scheme, and preliminary results of an attempt to verify quantitatively some hypotheses about the relation of fertility to family patterns and relations within the family.

The nuclear family of procreation seemed to fit the criteria for a study unit. Interactional-role analysis was chosen as the conceptual scheme and provided a basis for the diagnostic study questions.

Hypotheses relating to interspousal communication were tested. This type of communication is low in Puerto Rico; wifely modesty and respect for the husband are barriers. However, the families having the best communication were most likely to use birth control. Accuracy of perception by one spouse of the other spouse's attitudes on family size and fertility control was found to be important in relation to family limitation practices.

As is well known, Puerto Rico has a population density that is among the highest in the world. While the Commonwealth is rapidly controlling its death rate, a fact which further increases its population, it has to date made only minor adjustments in reducing its phenomenally high birth rate.

By 1951, at the beginning of the present research, demographic studies in Puerto Rico¹ had highlighted the following:

1. The average ideal family size in all strata of the population was three children.
2. Religious objections to birth control were minimal despite the high nominal affiliation with the Catholic Church.
3. Yet the average number of children born to Puerto Rican mothers was six

children, which reflects a birth rate virtually the same in 1950 as in 1900, when the death rate was several times what it is now.

To the family sociologist, the problem looked like a consequence of poor family organization. The goals of small family size were more or less present, the means for controlling fertility were at least superficially known,² and the usual resistances of religious teachings were minimal; therefore, it would seem to be a problem in family relations. This assumption was the basis for the research which was undertaken and is partially reported here.

In planning the research, the research team was conscious of several important needs: The unit of study and observation should be one that would provide optimal returns. The theoretical design should be one which would make sense out of the many propositions forthcoming from discussions with colleagues. The lack of an encompassing theory had been a deficiency in the otherwise monumental Indianapolis study of the social and psychological factors affecting fertil-

*A paper presented at the annual meeting of the Rural Sociological Society, Urbana, Ill., Sept. 7, 1954.

†University of North Carolina, Chapel Hill, N. C.; University of Puerto Rico, Rio Piedras, P. R.; and St. Lawrence University, Canton, N. Y., respectively.

¹The most comprehensive of these was Paul K. Hatt's *Backgrounds of Human Fertility in Puerto Rico* (Princeton, N. J.: Princeton University Press, 1952).

²See J. Mayone Stycos, "Patterns of Birth Control in Puerto Rico," *Eugenics Quarterly*, 1:3 (Sept., 1954).

ity.³ An appropriate theoretical design could be expected to give focus and organization to the explorations and would set limits to the subsequent analysis of the data collected. Finally, the research should be planned for carrying out in three stages—exploration, quantitative verification, and validation through controlled experiments.

This paper is a description of how these questions were resolved and a brief account of some findings from the second stage of the project, the quantitative verification phase. The data presented here relate to the focal area of intra-family communication as it affects use of birth control.

CRITERIA FOR SELECTING THE UNIT OF STUDY AND OBSERVATION

The units of observation and analysis for demographic studies of human fertility and its control have varied greatly; counties, states, provinces, countries, and whole societies have been used, sometimes stratified by income, occupation, education, and residence for purposes of studying differential fertility. Medically oriented researchers have usually focused on mothers, treating the woman as the biological unit of study, which fits their conception of the problem as a special instance of maternal health. The Indianapolis researchers appear to have focused on wives, although they obviously treated the wives as reporting agents for their families. Husbands were also interviewed in that study, but the data from husbands and wives were rarely joined to construct family

behavior measures. Unemployed to this moment by any research team are reference groups and nuclear families as units of study.

In the exploratory phase of the research, four criteria were proposed for the selection of a study and observational unit in fertility control:

1. The unit should be the entity of planning, choice making, and action. The assumption is that fertility planning is group rather than individual planning.
2. The unit should be capable of serving as a referent in some conceptual system of theory, if findings are to become part of accretive theory.
3. The unit must be accessible for empirical observation and investigation.
4. Ideally, the unit of study should also be the unit of medical and educational services in matters of fertility control.

Of the possible units considered—individuals, marriage pairs, family groups, reference groups, communities, regions—only one met all the above criteria satisfactorily, namely, the *nuclear family of procreation*. The husband and wife are the major actors in family planning and action, but their offspring exercise significant influence at later stages of the family cycle. Husband and wife are really acting as agents of the *family group* in their thinking and planning. They are more than a companionate pair: they are a family, in the process of becoming, and they think in those terms.

CHOICE OF A CONCEPTUAL SYSTEM

The nuclear family having been chosen as the unit of study and observation, it was necessary to choose from among the many approaches to the study of the family that conceptual system under which the nuclear family could be utilized most fruitfully as a planning and decision-making association. There are at least six alternatives from which to choose, each with its own distinctive definition of the

³ See the series of articles in the *Milbank Memorial Fund Quarterly*, 1943 through 1955, under the general title, "Social and Psychological Factors Affecting Fertility." Despite 23 precisely stated hypotheses in this study, there is lacking a conceptual system which might render theoretically relevant the findings of the study. As a consequence, it is difficult to make these findings accretive to existing social and psychological theories about human behavior.

family, its favorite key concepts, and its body of theory:

1. The institutional-historical approach, developed and interpreted by Carle C. Zimmerman.
2. The learning theory approach of the child psychologists, represented by Robert Sears and associates.
3. The situationist approach of James H. S. Bossard and associates.
4. The structure-function approach of the social anthropologists and some Harvard-trained sociologists.
5. The household economics approach of the consumption economists, in which management of time, money, and energy is the focus of attention.
6. The "family as an interactive system" approach of E. W. Burgess, the late Willard Waller, and others.

The choice seemed to lie between the structure-function and the interactive system approach, both of which have much to contribute to the research problem at hand. The interactional frame of reference for studying small groups was chosen, since it lends itself especially well to the study of the family as a planning and decision-making association. Its key concepts constitute a kit of mental tools which are uncommonly useful in studying the dynamics of human fertility. Some of the component concepts of the system are (a) status and interstatus relations, which become the bases for authority patterns and initiative-taking; (b) role, role conceptions, role taking, role playing, and role organization, with parents and children viewed in role-playing and role-taking terms, respectively; and (c) processes of communication, consultation, conflict, compromise, and consensus.

Interactional-role analysis is broad enough to capture and order the central processes involved in group planning and problem solving which are to be observed in a study of fertility dynamics. This is a large order, for included, among others, are the processes of goal setting, choice among means, and allocation of accountability and

responsibility for actions taken—as well as the built-in processes of evaluation of the successes and failures of the plan. Such evaluation problems must be fed back as matters for group solution and reorganization.

Finally, the interactional approach provides more than tools for observation. It provides a body of theory which can be drawn upon in the formulation of diagnostic study questions. From family-interaction theory come propositions which may be used as guideposts in the quest for the social-psychological antecedents of success in fertility planning and control. Note that these antecedents are different in quality from the psychological and socio-economic correlates of fertility in the Indianapolis study. They pertain to the dynamic quality of interaction systems and are oriented to intragroup processes rather than to the psychological traits, characteristics, and status categories captured by the Indianapolis group.⁴

FOCI SUGGESTED BY FAMILY INTERACTIONAL FRAMEWORK

When the family-interaction conceptual framework is used as a microscope for observation, the family can be seen in its most intimate internal operations. If one were permitted free and constant observation, he would find that the family, primarily the marriage pair to be sure, is concerned intermittently with what Robert B. Reed has called negative and positive control of procreation.⁵ Decisions are reached and actions agreed upon. Failures are discussed and actions taken to correct them. The process remains at the agenda level of discussion

⁴ P. K. Whelpton and Clyde V. Kiser (eds.), *Social and Psychological Factors Affecting Fertility* (New York: Milbank Memorial Fund, 1950), II, pp. 147-149.

⁵ *Ibid.*, pp. 270-276, a paper by Robert B. Reed, "The Interrelationship of Marital Adjustment, Fertility Control and Size of Family."

for the effective period of childbearing unless cut short by sterilization of one of the actors; and even this will be a consequence of husband-wife interaction.

By means of this perception of the family as the decision-making unit of society with respect to the control of family size, family-interaction theory tells us that the family's effectiveness as a planning unit will be a function of the efficiency of its communication system. A profitable study-focus, then, would be the processes of communication and the factors thought to be related to communication. Conditions favoring communication and impediments to communication which thwart goal setting, discussion, consensus, and decision making would receive major attention.

In a preliminary study by two of the present authors, in 1951-53, questions were designed to explore this dimension of family life and were tried out, with highly provocative results.⁶

⁶ Major details of these first 2 years of work are to be found in the report by J. Mayone Stycos, *Family and Fertility in the Lower Class of Puerto Rico* (New York: Columbia University Press, 1955), and the typescript by David Landy, "Child Rearing Patterns in a Puerto Rican Lower Class Community." The methodology, the hypotheses, and some of the research findings from the exploratory phase have also appeared in:

Millard Hansen, "The Family in Puerto Rico Project," in *Approaches to Problems of High Fertility in Agrarian Societies* (New York: Milbank Memorial Fund, 1952), pp. 50-61.

J. Mayone Stycos, "Family and Fertility in Puerto Rico," *American Sociological Review*, XVII:5 (Oct., 1952), pp. 236-246.

———, "La Dinámica del Control de la Natalidad en la Clase Baja de Puerto Rico," *Revista Mexicana de Sociología*, XV (Jan.-Apr., 1953), pp. 37-65.

———, "La Psicología Social del Control Poblacional," *Memorias de la Séptima Convención de Trabajo Social en Puerto Rico* (San Juan, P.R., 1955).

From the findings of this initial exploratory study, hypotheses were formulated for the quantitative verification study of 888 families during 1953-54.⁷ The present paper presents some of the diagnostic study questions from family interaction theory which were used as guideposts in exploring the processes of communication and the impediments to communication as they relate to fertility planning and control. The paper concludes with some findings which pertain to the issues raised by the study questions and come from three sample surveys undertaken in the island, 1951-54.

Findings will be drawn partially from intensive semi-structured interviews with 72 lower-class husbands and wives, partially from 3,000 short interviews with patients in public health clinics and hospitals throughout the island, and largely from the sample of 888 families studied in more detail. All three groups are of the lower educational class. The sample of 888 families was drawn from units meeting the following criteria: husband and wife living together, married 5 to 20 years, of proven fertility, and having less than six grades of education. All these couples faced problems of fertility control, since they still had several reproductive years ahead of them. The sample was stratified by rural-urban residence, length of marriage, and history of birth control use—"never users," "quitters," "current users," and "sterilized."

——— and Reuben Hill, "The Prospects of Birth Control in Puerto Rico," *Annals of the American Academy of Political and Social Sciences*, Vol. 285 (Jan., 1953), pp. 137-145.

⁷ For a statement of the hypotheses employed in the quantitative verification phase of the research, see especially the paper presented to the American Sociological Society by the present authors in September, 1954, "Family Structure and Fertility in Puerto Rico," *Social Problems*, III:2 (Oct., 1955).

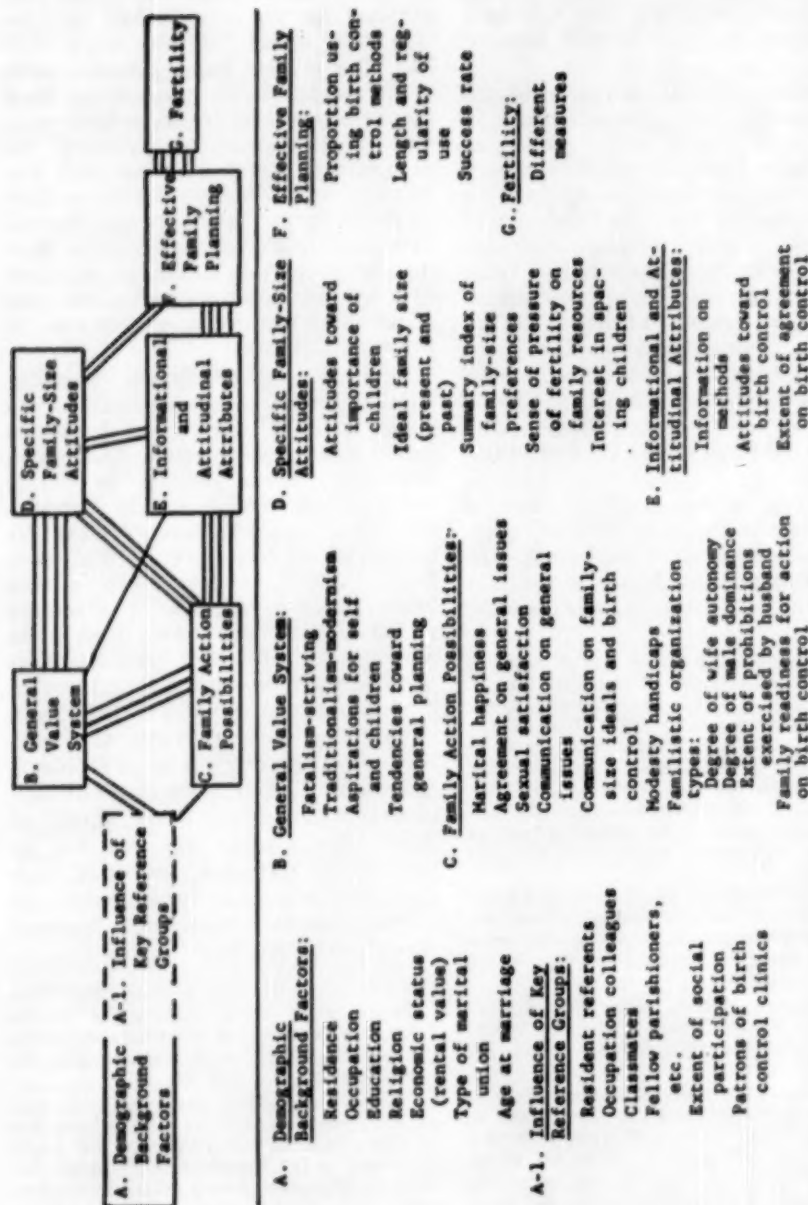


FIGURE 1. SCHEMA SPECIFYING THE HYPOTHETICAL INTERRELATIONSHIPS OF SELECTED ANTECEDENT, INTERVENING, AND CONSEQUENT VARIABLES IN FERTILITY PLANNING

Figure 1 illustrates the range of materials which are available from the study of 888 families. This analytical model permits emphasis upon parts, as in the present paper, while specifying the interrelationship with the whole. The final report, in book form, will tie the parts together and emphasize the whole.

As can be seen in the figure, the analytical procedures consist of interrelating independent, intervening, and dependent variables singly and by blocks. The demographic factors (Block A) of residence, education, occupation, type of marital union, religious affiliation, and rental value of domicile become meaningful in the schema when they are translated into the influence brought to bear by their corresponding reference groups on the formation and maintenance of general values. (The intercorrelations between combinations of reference groups and values held are high enough to warrant this inference.) Once the influences of the demographic factors through reference groups are identified as largely located in the motivational system of families, it is possible to relate the general and specific value systems (Blocks B and D) and the general and specific action systems (Blocks C and E) to the actions taken to limit family size (Block F). The expected interrelationships between the large blocks of variables are specified crudely by the size of the bars connecting them. The present paper focuses on the interrelationships between certain family action possibilities (listed in Block C) and effective family planning (shown as Block F). Efficient family organization is not enough by itself to bring about effective family planning; it is hypothesized that *general motivations to take action—the combination of the ideal of small family size, knowledge about the means of control, and efficient family organization—make up the "path"*

which families must follow to reach the goal of ideal family size.

INTRA-FAMILY COMMUNICATION

The diagnostic questions divide logically into those concerned with the processes and modes of communication and those highlighting the barriers to communication.

I. Processes of Communication:

A. Adequacy of Communication:

1. On what basic issues do spouses communicate well, and on what topics do they communicate poorly?
2. On how many basic issues is there communication and agreement?
3. How accurately can the husband describe the wife's attitudes about sex, contraception, child birth, and number of children desired? Conversely, how accurately can the wife describe her husband's position on these matters?
4. How much actual goal setting, crystallization of family ideals, and discussion of modes of implementing these ideals has occurred?

B. Modes of Communication:

1. What modes of communication are used in arriving at decisions on matters relating to fertility? — Highly rational? — Unidirectional discussion? — Equalitarian with much consultation?
2. How does the division of areas of accountability and responsibility between spouses affect initiative in raising problems for discussion and achieving agreement on actions taken?

C. History of Communication in the Marriage:

1. What situations in the past have been provocative of discussion of family planning and/or the decision to have another child?
2. When did husband and wife first talk about how many children they wanted?—Before the first child? — After subsequent children?—Never?

3. How long after one of the spouses feels he (she) has had enough children do the spouses share that perception?

4. What is the threshold of tolerance or difference on fertility matters which has to be exceeded before discussion will be precipitated? How painful must the objective situation become before communication occurs?

II. Impediments to Communication:

A. Female Modesty Barriers to Communication:

1. How much does the modesty of the wife inhibit her in seeking information about birth control from her husband and others?

2. How much does modesty of the wife reduce the communication between husband and wife on general matters?

3. How much does modesty of the wife render her a passive participant in family planning and decision making, waiting upon the husband for taking the initiative in restricting family size?

B. Status Difference between Husband and Wife Statuses as Barriers:

1. How much does the wife's respect for her husband's position inhibit her in raising questions about the family size and birth control matters?

2. How much does the husband's culturally defined dominance in the home prevent discussing matters of sex and birth control for purposes of planning with his wife?

It is not possible to relate the answers to all of the diagnostic study questions in this paper. Accordingly, a selection has been made from among them which most clearly demonstrate the place of intra-family communication in fertility planning.

BARRIERS TO COMMUNICATION

From the exploratory study of seventy-two families, the cleavages which make communication difficult have been identified. The differential sta-

tuses of male and female are expressed in ideologies which invidiously define the women as weak, naïve, and pure, and the man as strong, shrewd, and inherently evil. These ideologies are expressed in differential child-rearing practices and in different role expectations for the sexes before marriage. Girls internalize patterns of modesty, low sexual drives, and subservience to males. Boys internalize the patterns of high sex curiosity, strong sexual drives, and assertiveness with respect to women. To maintain this character structure the sexes are segregated in work and play, although exceptions are everywhere seen in the island with the inauguration of coeducation in the schools. There are, however, few opportunities for boys and girls to develop companionship patterns before marriage. Boys run with boys, and girls share their thoughts primarily with their own sex. Courtships are carried out under supervision of chaperons, which minimizes the opportunity for developing patterns of give-and-take discussion before marriage.⁸

Once married, two important barriers to communication are manifested—respect for the husband and modesty of the wife. The first is an important norm of husband-wife and father-child relations. A certain degree of formality is supposed to characterize the relations between wife and husband which would be threatened by discussion of intimate topics of interpersonal relations. One lower-class woman expressed the position poignantly:

... I never discuss such things with my husband. I feel too much respect for him.

Men, in turn, are hesitant to open up discussion on matters which they have not heard discussed by their own parents. They want to believe that their

⁸ See Reuben Hill, "Impediments to Freedom of Mate Selection in Puerto Rico," *Journal of Home Economics*, XLVII:3 (Mar., 1955).

TABLE 1. EXTENT OF DISCUSSION BETWEEN HUSBAND AND WIFE OF KEY MARITAL ISSUES, AS REPORTED BY 150 WIVES* IN PUERTO RICO

Topic	Frequency of discussion during marriage			All respondents
	Never	Occasionally	Frequently	
	Percentage distribution of respondents			
Husband's work	23.0	42.0	35.0	100.0
Discipline of children.....	25.0	47.0	28.0	100.0
Religion	35.0	48.0	17.0	100.0
Future plans.....	35.0	46.0	19.0	100.0
Birth control	47.0	35.0	18.0	100.0
Sexual relations	53.0	34.0	13.0	100.0

*A subsample of 888 wives interviewed.

wives are innocent and too modest to talk about matters of sex and childbirth. Said one husband in this connection:

... to my wife, me talk about these things? Look, man, I couldn't even try. I am not accustomed to talking about these things with women.

Modesty operates as a barrier to communication between husband and wife on topics which to an outsider would appear far removed from the tabooed areas of sex and childbirth. In a tabulation of the answers of 150 mothers from the sample of 888 families, the amount of communication between husband and wife on crucial marital issues appears small even for such neutral matters as child discipline and the husband's work, about a fourth never talking about these areas of family life (Table 1). In general, the more intimate the area, the more attenuated the discussion between husband and wife, with almost half never talking about birth control or sexual relations.

Another piece of evidence of the same order is the finding for 3,000 families that more than a third of the wives had never talked with their husbands about the number of children they desired. This reticence to talk about family size was greatest among the couples married over twenty years—about 50 per cent of this group had

never discussed family-size ideals, compared with 30 per cent for the couples married less than five years.⁹ One would think that the longer a couple had been married and exposed to the necessity of talking about family problems, the more likely they would have talked. The evidence is clearly in the other direction, even when differences in education between the two generations of couples are held constant, which suggests the possibility that the older couples have been more tongue-tied by the norms of respect and modesty.

It has been possible to quantify the phenomenon of female modesty by scaling the wife's answers to questions about the extent of embarrassment felt in facing certain familiar situations such as hearing off-color jokes, being examined by a physician, speaking about menstruation to her husband, informing her daughter about sexual matters, and undressing before her husband. Table 2 provides the data from which the modesty scale was constructed—the preliminary tabulations for 150 of the 888 families. It can be seen that embarrassment rises rap-

⁹ For further discussion of this finding, see J. Mayone Stycos, Kurt Back, and Reuben Hill, "Problems of Communication between Husband and Wife on Matters Relating to Family Limitation," *Human Relations* (forthcoming, June, 1956).

TABLE 2. EXTENT OF EMBARRASSMENT WOMEN SAY THEY WOULD FEEL IN CERTAIN SITUATIONS, AS REPORTED BY 150 WIVES* IN PUERTO RICO

Situation	Extent of embarrassment that would be felt			All respondents
	Much	Some	None	
	Percentage distribution of respondents			
Telling children about sex.....	56.0	18.0	26.0	100.0
Being examined by a physician.....	53.0	15.0	32.0	100.0
Having to listen to off-color jokes.....	32.0	20.0	48.0	100.0
Discussing menstrual period with husband.	24.0	20.0	56.0	100.0
Undressing in front of husband.....	16.0	33.0	51.0	100.0
Talking with husband about sex.....	15.0	22.0	63.0	100.0

*A subsample of 888 wives interviewed. From these data a modesty scale was constructed.

idly; for the different aspects of the test, the percentage who would feel "much embarrassment" varies from 15 to 56 per cent. Even the situation least likely to embarrass the respondents (talking with the husband about sex) would cause "much" or "some" embarrassment to 37 per cent of them. The modesty situation may be aggravated by the tendency of husbands to overestimate the amount of embarrassment felt by wives on these issues. In 53 per cent of the families, the husband overestimated his wife's modesty—as judged by her own statements—whereas in only 28 per cent of the cases did he underestimate it.

A seven-point modesty scale was constructed from the data in Table 2. When scale scores were cross-classified by communication on birth control matters, an appreciable relationship was found—the more modest the wife, the less the communication between husband and wife. The median modesty score for wives who had never talked with the husband on birth control matters was 3.70 as compared with 3.30 for wives who had.

In summary, then, there appear to be a number of areas of husband-wife relationships which are not open for free give-and-take discussion. Status differences between husband and wife, the taboos on discussion of sex, and the modesty of women in general combine

to make many Puerto Rican couples reticent when facing problems of goal setting with respect to family size, of mutuality in sex relations, of seeking the means for fertility control, and of putting these means to work. There follows now a discussion of the consequences of inadequate communication for fertility control. In this analysis, still more refined measures of effectiveness of communication are used to test the hypotheses.

CONSEQUENCES OF POOR INTERSPOUSAL COMMUNICATION

Table 3 shows the relationship between interspousal communication on the general issues of marriage and two expressions of fertility control: (1) "ever use" and (2) length of use (proportion of time in which birth control was used during marriage). "Users" have higher communication scores than "non-users," and long-term users have higher scores than short-term users. In both comparisons, the tetrachoric correlations are significant at or below the 5-per-cent level.

A more specific type of communication with respect to fertility control is discussion between husband and wife about methods of birth control, a first essential step in family planning. In Table 4, communication on birth control matters has been cross-classified with fertility control. In even more

TABLE 3. RELATION OF FERTILITY CONTROL AND INTERSPOUSAL COMMUNICATION ON GENERAL MARITAL ISSUES, 888 FAMILIES IN PUERTO RICO

Communication on general marital issues	Classification by fertility control practice				All respondents
	"Never users"	"Users"*	Short-term users**	Long-term users**	
<i>Scores</i>	<i>Percentage distribution of families</i>				
Low (0-2)	48.2	27.4	29.3	24.4	35.4
High (3-5)	51.8	72.6	70.7	75.6	64.6
All	100.0	100.0	100.0	100.0	100.0

Tetrachoric $r = 0.32$. Tetrachoric $r = 0.13$.

*Users of nonsurgical and surgical methods of birth control.

**Users of nonsurgical methods only.

TABLE 4. RELATION OF FERTILITY CONTROL AND INTERSPOUSAL COMMUNICATION ON BIRTH CONTROL, 888 FAMILIES IN PUERTO RICO

Communication on birth control	Classification by fertility control practice				All respondents
	"Never users"	"Users"*	Short-term users**	Long-term users**	
	<i>Percentage distribution of families</i>				
Have discussed	51.8	83.4	81.4	85.8	71.6
Have not discussed	48.2	16.6	18.6	14.2	28.4
All	100.0	100.0	100.0	100.0	100.0

Tetrachoric $r = 0.52$. Tetrachoric $r = 0.12$.

*Users of nonsurgical and surgical methods of birth control.

**Users of nonsurgical methods only.

striking fashion than in Table 3, the proportion using birth control increases with improved communication. The tetrachoric correlations are statistically significant.

A third index of communication adequacy has been constructed by matching the husband's statements about his wife's attitudes with the wife's answers about her own attitudes. This is a most rigorous test of adequacy of communication, since it concerns the major criterion of effective "interspousal" communication—the ability to understand and predict the spouse's wants. According to folk theory, children are more perceptive of the attitudes of parents than vice versa, wives more perceptive of husbands than vice versa, and servants more perceptive of their employers than vice versa, because subordinate

individuals listen more carefully and are more sensitive to nonverbal cues as attitude indicators than are superordinated individuals. The use here of perception of spouse's attitudes as a test of adequacy of communication provides a test of this folk theory.

A comparison of the totals in Tables 5 and 6 shows that the folk theory concerning superior perception by wives in subordinate positions is not upheld for the Puerto Rican sample. The husbands' record in perceiving accurately their wives' attitudes is actually higher for two of the three attitudes measured—the desire for more children and the intensity with which they are desired. The husbands were correct in 84.6 per cent of the families on the first attitude, as compared with 73 per cent accuracy by the wives. On the intensity question, 59.6 of the hus-

TABLE 5. RELATION OF FERTILITY CONTROL AND WIFE'S PERCEPTION OF HUSBAND'S ATTITUDES ON FAMILY SIZE AND BIRTH CONTROL, 318 FAMILIES IN PUERTO RICO*

Wife's perception of husband's attitudes	Classification by fertility control practice				All respondents
	"Never users"	"Users"	Short-term users	Long-term users	
Percentage distribution of families					
Husband's desire for more children:					
Wife correct	60.5	76.9	66.3	76.6	73.0
Wife incorrect	39.5	23.1	33.7	23.4	27.0
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.30$.		Tetrachoric $r = 0.17$.		
Husband's intensity of desire for children:					
Wife correct	46.1	55.1	60.0	50.6	53.0
Wife incorrect	53.9	44.9	40.0	49.4	47.0
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.15$.		Tetrachoric $r = -0.15$.		
Husband's attitudes on justification for birth control:					
Wife correct	23.1	43.4	38.7	48.3	40.7
Wife incorrect	76.9	56.6	61.3	51.7	59.3
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.23$.		Tetrachoric $r = 0.15$.		

*A randomly drawn subsample of the master sample of 888 families.

bands had correct answers, as compared with 53 per cent of the wives.¹⁰

¹⁰ The writers' best post hoc explanation for this reversal of the folk theory is that men in this patriarchal society of Puerto Rico are on the receiving end of information from wives and children but they do not reciprocate by giving of their own thoughts. Like the benevolent despots of old, they wish to be informed but they do not wish to be understood, and are consequently close-mouthed to preserve the formal distance between them and their subordinates. Further analysis of the interconnections between communication on birth control and accuracy of perception of spouses' attitudes reveals that the husband's view of whether or not birth control discussion really had taken place was predictive of higher empathy among spouses, whereas the wife's report on the matter was not. In families, then, where the husband said communication had in fact occurred, both husband and wife were more accurate in perceiving the other's attitudes, whether the wife agreed with his assertion or not.

As to empathy with respect to attitudes on birth control, husbands and wives were tied; only 40 per cent of each group had correct answers, perhaps a reflection of lower intercommunication in this area of family life.

In Table 5, accuracy of perception by the wife of the husband's attitudes on three family items is cross-classified with fertility control behavior. The findings are very much as expected: Where birth control has been practiced, wives show higher empathy—i.e., the wife is more accurate in estimating her husband's desire for more children, the intensity of this desire, and his evaluation of situations justifying birth control. The tetrachoric correlations of all three of these items with history of "ever use" of birth control methods are statistically significant.

Length of use is similarly correlated

TABLE 6. FERTILITY CONTROL BY HUSBAND'S PERCEPTION OF WIFE'S ATTITUDES ON FAMILY SIZE AND BIRTH CONTROL, 318 FAMILIES IN PUERTO RICO*

Husband's perception of wife's attitudes	Classification by fertility control practice				All respondents
	"Never users"	"Users"	Short-term users	Long-term users	
Percentage distribution of families					
Wife's desire for more children:					
Husband correct	80.3	86.0	89.0	87.0	84.6
Husband incorrect	19.7	14.0	11.0	13.0	15.4
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.20$.		Tetrachoric $r = 0.05$.		
Wife's intensity of desire for children:					
Husband correct	56.7	60.7	71.0	57.1	59.6
Husband incorrect	43.3	39.3	29.0	42.9	40.4
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.05$.		Tetrachoric $r = -0.22$.		
Wife's attitudes on justification for birth control:					
Husband correct	42.9	39.2	42.1	35.7	40.0
Husband incorrect	57.1	60.8	57.9	64.3	60.0
	100.0	100.0	100.0	100.0	100.0
	Tetrachoric $r = 0.07$.		Tetrachoric $r = -0.12$.		

*A randomly drawn subsample of the master sample of 888 families.

with correct perceptions of husband's position—except on the intensity of wishing more children, which is more closely related to short-term than to long-term use. The tetrachoric correlations are modest but statistically significant.

Table 6 provides similar information on the record of the husbands in predicting their wives' attitudes, as this in turn predicts types of fertility-control behavior. Although the husbands' empathy is higher than their wives', Table 6 does not reveal the close correspondence between empathy of husbands and family fertility control that Table 5 revealed for wives' empathy and fertility control. Failure to use birth control is predicted by only one item from the husbands' table, namely, the desire for more children. Length of use is negatively related to the husband's empathy, as measured by

his perception of his wife's intensity of desire for more children and his success in predicting his wife's position on the use of birth control. This runs counter to expectations, since the short-term users were thought to be those who would have incorrectly perceived their wives' positions on these matters.

The data also show a close relationship between husband empathy and the choice of nonsurgical birth control methods over sterilization as a means of family size control. Sterilization as a solution to the problem of population pressure within families is widespread in Puerto Rico,¹¹ and is the best-known

¹¹ The survey of 3,000 families found sterilization in 7.1 per cent of the couples married less than 5 years, 25 per cent in the group married 5-9 years, 28.7 per cent among those married 10-14 years, 27 per cent in the group married 15-19 years, and 17.9 per cent in the group married more

[footnote continued on next page]

TABLE 7. RELATION OF FERTILITY CONTROL METHODS USED AND HUSBAND'S PERCEPTION OF WIFE'S ATTITUDES ON FAMILY SIZE, 318 FAMILIES IN PUERTO RICO*

Husband's perception of wife's attitudes	Methods of fertility control used		All respondents
	Nonsurgical	Sterilization	
<i>Percentage distribution of families</i>			
Wife's desire for more children:			
Husband correct	88.1	80.0	86.0
Husband incorrect	11.9	20.0	14.0
	<hr/> 100.0	<hr/> 100.0	<hr/> 100.0
	Tetrachoric $r = 0.20$.		
Wife's intensity of desire for children:			
Husband correct	65.0	49.2	60.7
Husband incorrect	35.0	50.8	39.3
	<hr/> 100.0	<hr/> 100.0	<hr/> 100.0
	Tetrachoric $r = 0.26$.		

*A randomly drawn subsample of the master sample of 888 families.

method on the island. Its popularity among all classes is due in part to the lack of popularity of the less drastic mechanical and chemical methods which offend the sensitivities of modest or prudish women, and which are considered by many males to interfere with pleasure.

Data for the 888 families suggest that sterilized mothers have many of the same characteristics as women who have never used other birth control methods at all; indeed, nearly fifty per cent moved directly to sterilization from the category of "never users." Most of the remainder used birth control methods irregularly, or on a short-term basis before being sterilized. Less than ten per cent were regular and long-term users before being operated on.

In Table 7 there is a statistically significant association between the man's incorrect perception of his wife's attitudes about having more children and the use of sterilization as the family's solution to family size control. For both attitude measures

than 20 years. See J. Mayone Stycos, "Female Sterilization in Puerto Rico," *Eugenics Quarterly*, 1 (June, 1954), p. 5.

the tetrachoric correlations are significant at the 5-per-cent level. This suggests that sterilization, like failure to use contraceptives at all, is a concomitant of faulty communication between husband and wife. Further analyses along this line are being carried out.

SUMMARY

As strangers to the social demography of Puerto Rico, the authors faced a number of problems when the family and fertility project was launched. A number of choices had to be made: the selection of a suitable unit of observation, the choice of a conceptual system appropriate to the problem, and the utilization of this system for constructing diagnostic study questions.

One section of the study, developed directly from propositions in family-interaction theory, centered on the consequences — for successful family planning — of effective "interspousal" communication and empathy in interpersonal relations. The hypotheses were confirmed for the most part, though reversed in two instances. The

preliminary findings are summarized below:

1. Communication between spouses is low in Puerto Rico, not only on tabooed topics of sex and birth control but also on number of children desired, future plans, discipline of children, and husband's work.
2. Modesty among women is negatively associated with communication on birth control matters.
3. Modesty among women and wifely respect for the husband, combined with overestimation of his wife's modesty by the husband, conspire to impede discussion on a wide variety of topics crucial to effective family planning.
4. The higher the "interspousal" communication scores on the general issues of marriage, the higher the proportion of families using birth control methods and using them on a long-term basis.
5. Communication on birth control matters is closely related to use of birth control methods and to their long-term use.
6. Accuracy of perception—by the husband of his wife's attitudes toward

family size, and by the wife of her husband's attitudes — is associated with prior history of adequate "interspousal" communication.

7. Husbands were more frequently correct in perceiving their wives' attitudes than vice versa, a finding which reverses the theory that subordinates are more perceptive than superordinates.
8. Accuracy of perception by the wife of her husband's attitudes concerning family size and birth control is associated significantly with a history of using birth control methods and with their long-term use.
9. Accuracy of perception by the husband of his wife's attitudes toward family size and birth control is not uniformly associated with the use of birth control and is negatively associated with its long-term use. This is contrary to the expected relationship.
10. Accuracy of perception by the husband of his wife's family-size attitudes is significantly associated with the choice of nonsurgical methods of birth control over sterilization as the means of fertility control used by the family.

USE OF BIRTH DATA IN DELINEATION OF MEDICAL SERVICE AREAS*

by Peter Kong-ming New†

ABSTRACT

The purpose of this paper is: (1) to test, in two additional states, the applicability of a method devised by Ciocco in studying "intercounty movements" relative to live births and to suggest some possible refinements to his method, and (2) to delineate certain "medical areas" in these two states on the basis of the findings. In order to investigate these phenomena, the live births in each Michigan and Missouri county during 1952 were divided into two components—"In-Residence" and "Out-Residence" births.

Some possible explanations of variation of the "In-Residence" ratios among the different counties are examined in relation to three independent variables: (1) number of hospital beds per 1,000 population, (2) number of physicians relative to population, and (3) median family income.

Ciocco's method is found to have some usefulness; but it is shown that each state should be examined separately, and other factors should be considered.

INTRODUCTION

In 1945, Ciocco and Altenderfer published a study using live birth data of 1942 for eight states to investigate the phenomenon of "interdependency of counties" with regard to medical services.¹ They felt that since reports of intercounty movements of persons who seek medical care are not recorded on a nation-wide basis, it would be more feasible to use birth data, which record the place of occurrence as well as the place of residence of the mother. Their explanation for using birth data seems reasonable:

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†Social Science Research Council Predoctoral Fellow, Community Studies, Inc., Kansas City, Mo.

¹ Antonio Ciocco and Marion E. Altenderfer, "Birth Statistics as an Index of Interdependence of Counties with Regard to Medical Service," *Public Health Reports*, 60 (Aug. 24, 1945), pp. 973-985. The states studied were Georgia, Kansas, Maryland, Massachusetts, Ohio, Oregon, Tennessee, and Virginia.

The main objective of the intercommunity movement relative to births and deaths is to take advantage of medical facilities, such as hospitals and specialists, lacking in the place of residence but available elsewhere. It is reasonable to assume then that the size and direction of the movement will furnish an index of the degree of dependence of one locality upon the medical facilities of another.²

DATA AND METHOD

By analyzing the patterns of movement reflected in birth data, Ciocco devised a method whereby the number of births to residents of a county is expressed as two ratios: "In-Residence" (I-R.), to represent the ratio of the number of births to residents which occurred within the county to total births occurring to residents; and "Out-Residence" (O-R.), to represent the ratio of the number of births to residents which occurred in a specific outside county to total births occurring to residents.³ The ratios are expressed in percentage form; the I-R. ratio is complementary to the O-R. ratio (total of specific county O-R.'s) and the total is 100.

With basic data similar to Ciocco's,

² *Ibid.*, p. 974.

³ For a detailed description of Ciocco's methodology, cf. *ibid.*, pp. 974-976.

TABLE 1. DISTRIBUTION OF COUNTIES BY IN-RESIDENCE BIRTH (I-R.) RATIO, MICHIGAN AND MISSOURI, 1952

In-Resident ratio (I-R.)	Michigan counties		Missouri counties	
	Number	Per cent	Number	Per cent
95 or higher.....	9	10.8	4	3.5
85-94	29	34.9	24	20.9
75-84	9	10.8	14	12.2
50-74	17	20.6	25	21.7
Less than 50.....	19	22.9	48	41.7
All.....	83	100.0	115	100.0

TABLE 2. RELATIONSHIP BETWEEN THE NUMBER OF HOSPITAL BEDS PER 1,000 POPULATION AND MEAN I-R. RATIOS, MEDIAN FAMILY INCOME, AND POPULATION-PHYSICIAN RATIOS, MICHIGAN AND MISSOURI COUNTIES, 1952

Selected county characteristics	Michigan counties*		Missouri counties*	
	No hospital beds	4 or more hospital beds per 1,000 population	No hospital beds	3 or more hospital beds per 1,000 population
In-Residence ratio	36.0	87.2	36.9	79.8
Median family income.....	\$1,854	\$2,827	\$1,519	\$2,164
Population per physician.....	4,380	2,827	2,391	1,672

*Included in the table are those counties in each state which are at the extremes in number of hospital beds per 1,000 population.

the present study attempts to duplicate the previous "model," the purpose being to suggest some possible refinements in view of more recently available data and to test the applicability of the method in two additional states.

Live birth data of 1952 for the states of Michigan and Missouri were specially tabulated to make the present study possible. In that year, 90,118 resident live births were recorded in Missouri and 177,835 in Michigan. The In-Residence and Out-Residence ratios were tabulated for the counties of each state (115 in Missouri, 83 in Michigan).⁴

DISTRIBUTION OF COUNTIES BY IN-RESIDENCE RATIOS

Table 1 shows, for the two states studied, the distribution of counties by

⁴ Owing to lack of space, the detailed tabulation for the various counties is not presented in this paper.

I-R. ratios. Both states had many births outside the county of residence, but Missouri had more counties in the lower I-R. categories; 63.4 per cent of Missouri's counties and 43.5 per cent of Michigan's had I-R.'s of less than 75.

ANALYSIS OF RELATIONSHIPS: COUNTIES AS UNITS

Three factors were examined to discover possible explanations of variation of the I-R. ratios of the counties: (1) the medical facilities, as measured by the number of general hospital beds per 1,000 population; (2) the number of physicians relative to population; and (3) economic level as measured by the median family income.⁵ Table 2

⁵ For number of hospital beds in Michigan, cf. *The Michigan Hospital Plan* (rev., Aug. 25, 1953), Dept. of Health, Lansing, Mich.; for number of physicians in Michigan, cf. *The Journal of the Michigan State Medical Society*, 52 (Sept., 1953); for me-

[footnote continued on next page]

shows that the counties with no hospital beds have correspondingly unfavorable characteristics with regard to their mean I-R. ratios, median income, and population-physician ratios as compared with counties which have 3.0 or more hospital beds per 1,000 population.

When the I-R. ratios of the counties are examined in relation to the three factors, the simple correlation ratios suggest that possibly some other explanation is in order. In Michigan, the coefficients for I-R. ratio and hospital beds per thousand population and I-R. ratio and median family income (.44 and .49, respectively), were significant at the 1-per-cent level, while r for the number of people per physician and I-R. ratio (-.11) was not significant.⁶ In Missouri, the coefficients were not significant.

A number of factors may account for the inconsistencies of the correlation ratios between the states. First, the juxtaposition of large cities which border Michigan and Missouri may explain this. In Michigan, the counties depend more on each other within the state, since Michigan is bordered by

dian family income of Michigan and Missouri, cf. *County and City Data Book, 1952* (Washington, D. C.: U. S. Gov't Printing Office), pp. 219, 227, 251, 259; for number of hospital beds in Missouri, cf. *Number of General Hospital Beds in Missouri, 1951*, Division of Health, Jefferson City, Mo.; for number of physicians in Missouri, cf. *A.M.A. Directory, 1950*, American Medical Association, Directory Department (Chicago, Ill.).

⁶In Michigan, the number of hospital beds and the median family income explain some of the variation of the I-R. ratios of the counties. Further analyses by partial correlation indicate that median family income was the most important variable. This analysis shows that control of other independent variables reduces only slightly the relationship between I-R. ratio and median family income: $r_{12.3} = .42$, $r_{12.4} = .48$, $r_{12.34} = .40$, and $r_{12} = .49$, where subscript (1) designates I-R. ratio; (2), number of hospital beds per 1,000 population; (3), median family income; and (4), population per physician.

only three other states—Indiana, Ohio, and Wisconsin. Two large cities (South Bend, Indiana, and Toledo, Ohio) are easily accessible to the residents of the southern border counties. Missouri, on the other hand, is bordered largely by four states (Illinois, Iowa, Arkansas, and Kansas) and partially by another four (Kentucky, Tennessee, Oklahoma, and Nebraska). In the northern Missouri counties, which border Iowa, movements across the state line for child birth have been most pronounced.⁷ The location of a number of cities just across the Missouri line undoubtedly influences these movements. For example, 87 per cent of all O-R. births of Clark County went to Iowa (the Iowa cities of Fort Madison and Burlington are situated nearby). In Lewis County, 52 per cent of all the O-R. births went to Illinois (where Quincy is the nearest large city) rather than to Hannibal, Missouri, which is situated one county south.

A second factor that may account for the discrepancy is the uneven distribution of hospital facilities in the states. The hospitals in Michigan cover quite thoroughly the entire state, so that the residents of the state need travel only a short distance to obtain medical service, as compared with Missouri residents. Available data indicate that of all the counties which had an Out-Residence ratio of more than ten, 83 per cent of Michigan counties (as against only 48 per cent of Missouri counties) had more than sixty per cent of the total O-R. births occurring in their adjacent counties. On the whole, Missouri residents had to go a longer distance to obtain medical services.

A third factor is the rural-urban division of the states. The ecological dif-

⁷Data are available for the number of births occurring in a specific state from different counties in Missouri, although the specific towns in the other states where the births occurred are not available.

ferentiation of both states may explain a great deal of the In-Residence variation which otherwise may not be accounted for by simply manipulating certain statistical data. The division of Michigan into urban and rural areas is clearly evident by the number of large cities which are congregated in the southern region, below a southwest-to-northeast axis from Muskegon to Bay City. The centers of population in Missouri, however, are concentrated at either end of the state (Kansas City and St. Louis) and widely separated in the other parts.

CLASSIFICATION OF COUNTIES BY O-R.-I-R. RATIOS

On the basis of the I-R. ratio of each county and the O-R. ratio for that county to each other county, the counties of both states were classified. The pattern of O-R. births in Missouri suggested the following classification, a modification of Ciocco's. The classification attempts to indicate the degree of dependency of a county in regard to medical services, on the basis of birth data alone.

- I. Counties with at least 75 per cent of all births occurring in hospitals:
 - A. Hospital centers:
 1. At least 85 per cent I-R. births, and
 2. At least a third of the births to residents of each of at least half of the adjoining counties took place here.
 - B. Self-sufficient:
 1. At least 70 per cent I-R. births, and
 2. At least 20 per cent of the births to residents of each of at least half of the adjoining counties took place here, and/or
 3. Not more than 15 per cent of the O-R. births were in all adjoining counties combined.
 - C. Partially dependent:
 1. At least 50 per cent I-R. births, and
 2. Between 15 and 33 per cent of the births to residents in

less than half of the adjoining counties took place here, and/or

3. More than 15 per cent of O-R. births took place in all adjoining counties combined.

D. Dependent:

1. Less than 50 per cent I-R. births, and
2. Less than 10 per cent of the births to residents of each of the adjoining counties took place here.

II. Counties with less than 75 per cent of all births occurring in hospitals.

The above criteria were then used to classify the counties in Michigan when the ratios were computed for the second state. Figures 1 and 2 and Table 3 show the distribution of the Michigan and Missouri counties in terms of this classification. It is apparent that the pattern of O-R. births in the two states is quite different. Whereas in Michigan the O-R. births of a given county are generally not concentrated in any one county, in Missouri they are strongly concentrated in certain counties where towns of 10,000 or above are situated. Furthermore, the 7 per cent of Missouri counties in the hospital-center category served 44 per cent of their surrounding counties, while the 11 per cent of Michigan counties that are centers served only 20 per cent of their surrounding counties. The higher number of Missouri counties which are dependent (practically 50 per cent as against 25 in Michigan) partially accounts for this. However, closer examination of the geographical location of the other counties (self-sufficient and partially dependent) probably would explain more adequately this phenomenon.

MEDICAL CENTERS

The maps indicate, for a given county, the O-R. ratios for contiguous counties, but they do not in every case delineate the actual areas which some

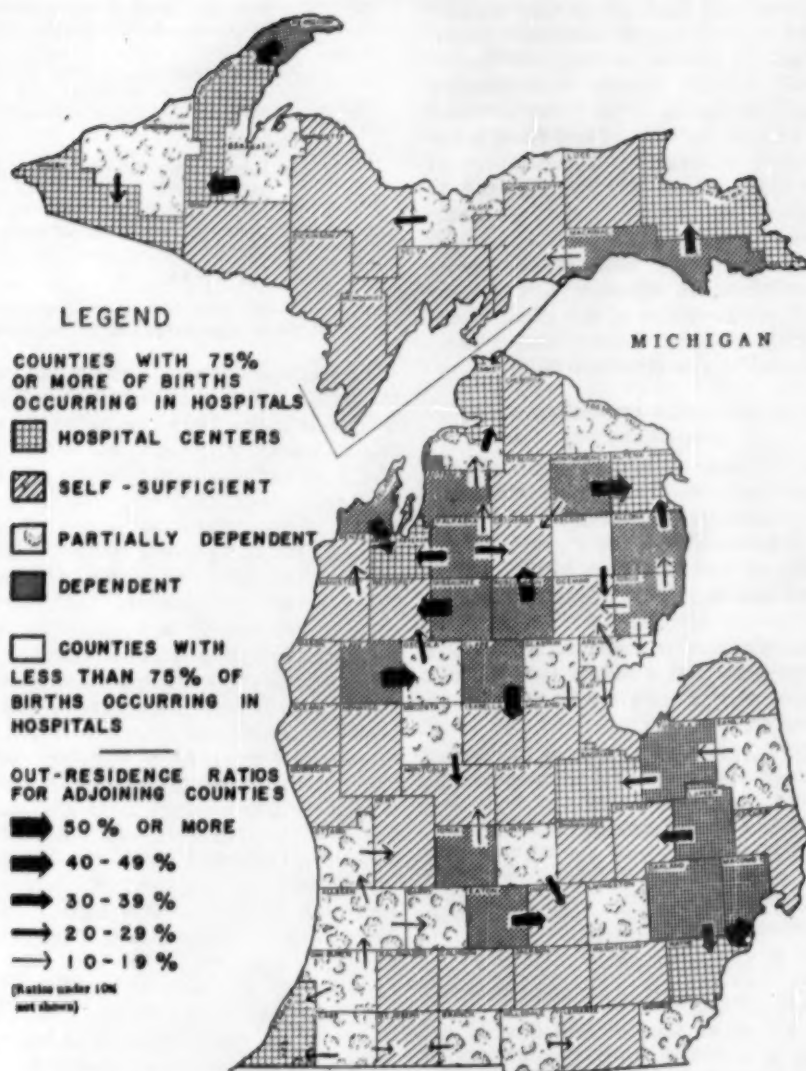


FIGURE 1. CLASSIFICATION OF COUNTIES ON THE BASIS OF I-R.—O-R. RATIOS, SHOWING PROPORTIONS OF OUT-RESIDENCE BIRTHS OCCURRING IN ADJACENT COUNTIES, MICHIGAN, 1952

of the centers serve. Where the medical facilities of the state are more thoroughly distributed, as in Michigan, an analysis of O-R. births in contiguous counties will explain adequately

the phenomenon of dependency; but where many counties in the same area lack medical facilities, as in Missouri, a large area will look to the "center" for medical service. One such center

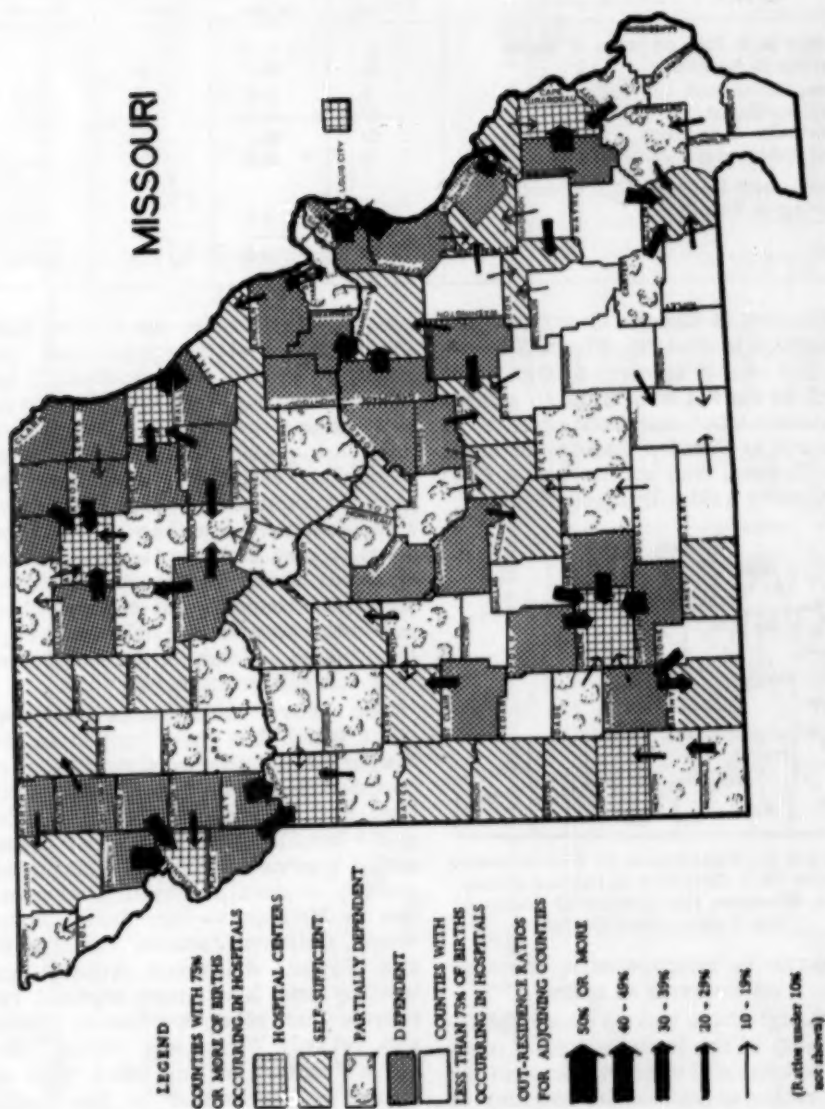


FIGURE 2. CLASSIFICATION OF COUNTIES ON THE BASIS OF I-R.—O-R. RATIOS, SHOWING PROPORTIONS OF OUT-RESIDENCE BIRTHS OCCURRING IN ADJACENT COUNTIES, MISSOURI, 1952

TABLE 3. DISTRIBUTION OF COUNTIES BY CLASSES BASED ON I-R.—O-R. RATIOS
MICHIGAN AND MISSOURI, 1952

Classification of counties on basis of I-R.—O-R. ratios	Michigan counties		Missouri counties	
	Number	Per cent	Number	Per cent
<i>Counties with 75% or more of births occurring in hospitals:</i>				
Hospital centers.....	82	98.8	94	81.7
Self-sufficient	9	10.8	8	7.0
Partially dependent	34	41.0	26	22.6
Dependent	20	24.1	25	21.7
Dependent	19	22.9	35	30.4
<i>Counties with less than 75% of births occurring in hospitals:</i>				
All	1	1.2	21	18.3
All	83	100.0	115	100.0

in Missouri is Greene County, where Springfield is situated. Figure 3 shows that this county receives a large number of births not only from all adjoining counties but also from counties as far north as Camden County (65 miles from Greene) and as far east as Oregon County (105 miles from Greene).

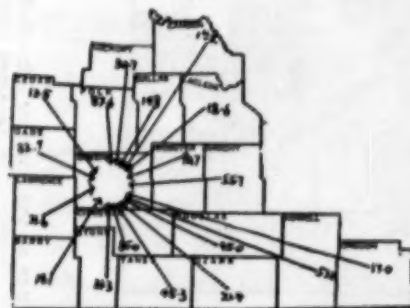


FIGURE 3. PERCENTAGE OF OUT-RESIDENT BIRTHS THAT OCCURRED IN GREENE COUNTY, MISSOURI, FOR EACH OF 18 COUNTIES SURROUNDING GREENE

ANALYSIS OF RELATIONSHIPS: CLASSES OF COUNTIES AS UNITS

Although there was no consistent relationship of the three indices of medical facilities and economic level to the O-R. ratios of individual counties in the two states, it seemed reasonable to expect a relationship of these variables to the classification of counties—in other words, the number of hospital beds

per 1,000 population, the median family income, and the population per physician should vary significantly between the groups of counties. The results of one criterion analysis of variance, using each of the factors as independent variables, show that the grouped counties in both states do vary significantly (P less than .01) with respect to each of these factors. In other words, there are pronounced differences of economic and medical characteristics between the different groups of counties. Tables 4, 5, and 6 also bear out this relationship.

The above tables emphasize one point which has been implied in the discussion of uneven distribution of hospital facilities. The counties with high median family income and adequate hospital facilities do not necessarily become "centers." This is especially evident in one strip of counties in Michigan—Van Buren, Kalamazoo, Calhoun, Jackson, Washtenaw, and Wayne. All these counties are wealthy and have more medical resources than other counties in Michigan, yet only Wayne is a "center." Being a "center" or any other type of county is determined by the conditions of the other counties which surround a given county. In Missouri, where a large number of counties with inferior medical facilities are adjacent

TABLE 4. DISTRIBUTION OF CLASSES OF COUNTIES BY NUMBER OF GENERAL HOSPITAL BEDS PER 1,000 POPULATION, MICHIGAN AND MISSOURI, 1952

[illegible]

TABLE 5. DISTRIBUTION OF CLASSES OF COUNTIES BY MEDIAN FAMILY INCOME, MICHIGAN AND MISSOURI, 1952

[illegible]

TABLE 6. DISTRIBUTION OF CLASSES OF COUNTIES BY POPULATION PER PHYSICIAN, MICHIGAN AND MISSOURI, 1952

Population per physician	Counties with 75% or more of births occurring in hospitals							
	Hospital centers		Self-sufficient		Partially dependent		Dependent	
	Michigan (N = 9)	Missouri (N = 8)	Michigan (N = 34)	Missouri (N = 26)	Michigan (N = 20)	Missouri (N = 25)	Michigan (N = 19)	Missouri (N = 25)
Under 1,000	11	75	21	23	10	60	11	11
1,000-1,499	78	25	32	38	10	20	20	20
1,500-1,999	11	.....	26	27	45	60	11	29
2,000-2,499	.....	.....	6	8	10	8	21	17
2,500 or more	.....	.....	15	4	35	12	168	23
All	100	100	100	100	100	100	100	100

¹ Including 3 counties which have no physicians.

² No physician.

to a "center," the characteristics of a "center" are more sharply defined.

CONCLUSIONS AND IMPLICATIONS

The application of Ciocco's method to two additional states, Michigan and Missouri, whose characteristics are quite different, makes it clear that certain factors other than the medical facilities and economic levels of counties are equally important when In-Residence and Out-Residence ratios are considered. From the experience of this study, the following observations may be offered:

First, one factor which needs to be more thoroughly examined is the matter of distance which the people must travel to seek medical service. It is not sufficient just to measure the distance involved, but it probably would be much more meaningful if a method could be devised to express distance as a function of (a) the type of roads accessible to the resident—such as U.S. highways, gravel, or "hard-top," (b) the number of villages and towns which surround a sizable city, and (c) the number of medical facilities available within a certain area.³ The present study shows the inadequacy of explanation of place of birth when only county data are used, without consideration of several counties as larger medical service areas.

Second, underlying the above point are the general differential characteristics of the states. This study demonstrates the need for examining I-R. and O-R. ratios of each state independently. Although Ciocco implied in his article certain variations of social

³ Methods of determining medical facilities are suggested by C. Horace Hamilton, "Procedures Used in the Preparation of a Medical Service Area Map for North Carolina," *Rural Sociology*, XVII:4 (Dec., 1952), pp. 367-371; and John F. Thaden, *Distribution of Doctors of Medicine and Osteopaths in Michigan Communities*, Special Bull. 370, Michigan State College (East Lansing, June, 1951).

and medical characteristics in eight states, analysis of the I-R. ratios of grouped counties leaves a number of questions unanswered. By purposely analyzing Michigan and Missouri separately, this investigation reveals the need of viewing the I-R. ratios only in terms of individual states to enable a meaningful explanation of the variation of these ratios.

The distribution of medical facilities in Michigan and Missouri raises the whole question of the feasibility of applying certain classifications to counties in order to generalize the study of movements relative to births, as Ciocco did in his study of eight states. The present study has shown that such

groupings can be meaningful only if each of the surrounding counties is analyzed separately.

The study of O-R. ratios may be valuable as an index of interdependency of counties with regard to medical services, but it is a limited one. Due to modern transportation conveniences, medical service should be viewed in terms of areas which encompass a large number of counties. Ciocco has developed a method which may be utilized to good advantage, but in order to generalize the concept of I-R. ratios, it may be necessary to develop further methods whereby the concepts of medical service areas are brought into focus.

PATTERNS OF NET MIGRATION AND CHANGES IN CRUDE BIRTH RATES IN THE NORTH CENTRAL STATES, 1940-1950*

by Paul J. Jehlikt

ABSTRACT

This paper examines and describes patterns of migration, changes in birth rates, and the relationship of these two factors for the rural and urban population in state economic areas of 13 North Central States, 1940-1950.

Analysis of the data clearly shows the concentration of population through net in-migration in the rural parts of metropolitan areas, and especially in the older and larger metropolitan areas. The 64 state economic areas of net in-migration had gains of 19, 36, and 14 per cent in total, rural, and urban population, respectively. The 109 areas of net out-migration maintained a stationary total population, lost 5 per cent in rural population, and gained 10 per cent in urban population.

Areas of net in-migration showed a numerical increase of 7.2 births per 1,000 population, 1940-1950, and those of net out-migration an increase of only 4.6. Areas showing the rural-in, urban-out migration pattern had the largest increase, 7.5, while the rural-out, urban-out areas had the least increase, 3.8.

The data point up the need for expanded study of the various demographic, social, and economic factors affecting migration and fertility and their relationships.

Migration and differential reproduction are the principal determinants of the amount of redistribution that occurs in a given population group.¹ An important cause of migration is economic imbalance, with migrants constantly moving toward areas of supposedly greater opportunity and security. High rates of natural increase and the resulting additions to the labor force serve to complicate this imbalance. If migrants are to be directed

to areas of opportunity, it is necessary to know something of the patterns of migration.

The focus of this paper is on an analysis of the significant patterns of net migration and of changes in crude birth rates and of their relationships in 13 North Central States during the decade 1940-1950.² The geographic units of analysis are the 173 state economic areas in the 13 states; 64 of these areas showed a net in-migration and 109 showed a net out-migration.³

METHOD AND SOURCES OF DATA

The state economic areas, both metropolitan and nonmetropolitan, were

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†Office of Experiment Stations, U. S. Department of Agriculture, Washington, D. C. Former staff member of Farm Population and Rural Life Branch, Agricultural Marketing Service, USDA, at Iowa State College, Ames, Iowa.

¹ Harold F. Dorn and Frank Lorimer, "Migration, Reproduction, and Population Adjustment," *Annals of the American Academy of Political and Social Science*, Vol. 188 (Nov., 1936), p. 1.

² The states included in this analysis are Kentucky, Ohio, Michigan, Indiana, Illinois, Wisconsin, Missouri, Iowa, Minnesota, Kansas, Nebraska, South Dakota, and North Dakota. This corresponds to the North Central States as defined by the U. S. Census, except for the addition of Kentucky.

³ For a description of the procedures used in grouping counties in the United States into state economic areas, see Donald J. Bogue, *State Economic Areas*, U. S. Bureau of the Census (Washington, D. C., 1951).

divided into migration-pattern subgroups on the basis of whether they experienced a net in- or out-migration and whether they had a net in- or out-migration of rural and of urban population. The 64 areas of net in-migration fell into the following subgroups: (1) rural-in, urban-in; (2) rural-in, urban-out; and (3) rural-out, urban-in. The 109 areas of net out-migration fell into these groups: (1) rural-in, urban-out; (2) rural-out, urban-in; (3) rural-out, urban-out; and (4) rural-out, no urban population. (See Figure 1 and Table 1.)

TABLE 1. METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS IN 13 NORTH CENTRAL STATES, CLASSIFIED BY TYPE OF POPULATION MIGRATION PATTERN, 1940-1950

Type of migration pattern ¹	All areas	Metropolitan areas	Non-metropolitan areas
	Number	Number	Number
All areas	173	48	125
Net in-migration ..	64	39	25
Rural-in, urban-in	30	20	10
Rural-in, urban-out	29	18	11
Rural-out, urban-in	5	1	4
Net out-migration ..	109	9	100
Rural-in, urban-out	2	2	.....
Rural-out, urban-in	56	.....	56
Rural-out, urban-out	50	7	43
Rural-out ²	1	.....	1

¹ Classification of state economic areas by type of migration pattern was on the basis of the 1940 definition and classification of rural and urban population.

² State economic area containing rural population only.

Data are from contributions made by the Agricultural Experiment Stations in the thirteen North Central States to Project NC#18, entitled "Problems of Rural Areas Resulting from Population Changes." Basic sources of data

* For a discussion of the organization of the regional project, see R. E. Wakeley and

were the United States Census reports of population for 1940 and 1950, and published and unpublished tabulations of births and deaths supplied by the National Office of Vital Statistics and state departments of health.

Net migration as used in this paper refers to the difference between out-migration and in-migration for a given area between 1940 and 1950 and for a specified population group. It may be expressed in the following formula:

$$M = I - E = P_2 - P_1 - (B - D)$$

where M = net migration; I = the number of in-migrants; E = the number of out-migrants; P_2 = the 1950 population; P_1 = the 1940 population; B = the number of births; and D = the number of deaths.

Since the statistic indicating net migration is a residual, it inherits a combination of unadjusted errors in census enumeration and vital statistics reporting. Adjustments made in the course of the regional analysis materially reduced these errors, however.³

POPULATION CHANGE

The combination of migration and natural increase resulted in a gain of 4,399,000 in population in the 13 states during the 10-year period. Rural population increased 1,323,000 and urban, 3,076,000.⁴ Percentagewise, the in-

Paul J. Jehlik, "Regional Research in Population Dynamics," *Rural Sociology*, XVIII: 2 (June, 1953), pp. 166-169.

³ Estimates of net migration were made on the basis of the 1940 definition and classification of rural and urban population. Birth but not death data were adjusted for underregistration. Student populations as enumerated in 1950 were retained in the county in which the institution of higher learning was located. Deaths in resident-type institutions were retained in the county in which the institution was located.

⁴ Net out-migration in the total population amounted to 651,000 persons. In the rural population, it was 851,000, while 200,000 persons were added to the urban population through net in-migration.

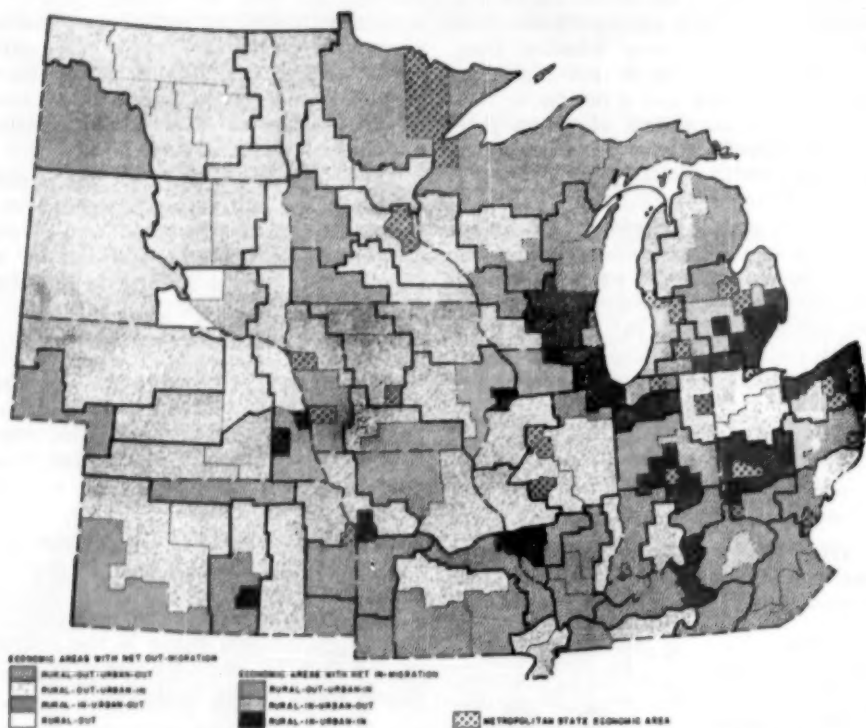


FIGURE 1. METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS IN 13 NORTH CENTRAL STATES, BY POPULATION MIGRATION PATTERN, 1940-1950

creases were 10, 7, and 13 per cent, respectively (Table 2).

In 1950, 59 per cent of the total population, 37 per cent of the rural, and 76 per cent of the urban was in the state economic areas that had shown a net in-migration during the decade. Over the 10-year period, the total, rural, and urban populations in these areas of in-migration had increased 19, 36, and 14 per cent, respectively. In areas of net out-migration the total population had remained practically stationary—the rural declined 5 per cent while the urban gained 10 per cent.

Areas of net in-migration contained more than 94 per cent of the region's metropolitan population, but only 25 per cent of the nonmetropolitan popu-

lation. This emphasizes rather sharply the role played by the highly urbanized and thickly settled metropolitan areas in the growth of population.

Suburbanization and infiltration of rural areas by nonfarm-employed residents was indicated by the 55 per cent increase in rural population in the metropolitan areas having net in-migration. This is in sharp contrast to the modest 13 per cent increase in urban population in the same areas.

POPULATION CHANGE IN AREAS OF NET IN-MIGRATION

The 64 state economic areas having net in-migration, 1940-1950, may be seen in Figure 1. The several migration patterns for this group are shown in the crosshatch series. Economic

TABLE 2. PERCENTAGE CHANGE IN POPULATION, 13 NORTH CENTRAL STATES, BY RURAL AND URBAN RESIDENCE FOR METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS, 1940-1950, WITH AREAS CLASSIFIED BY TYPE OF POPULATION MIGRATION PATTERN

Type of migration pattern ¹	All areas			Metropolitan areas			Nonmetropolitan areas		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
	Per cent			Per cent			Per cent		
All areas	10.2	7.1	12.6	18.3	49.7	12.8	3.4	-0.8	12.2
Net in-migration....	18.6	35.6	13.5	19.2	55.4	13.4	16.3	17.9	14.3
Rural-in, urban-in..	19.0	40.2	14.4	19.0	57.1	14.2	18.9	19.6	17.9
Rural-in, urban-out	18.6	38.1	10.8	19.6	55.0	10.9	16.3	22.2	10.3
Rural-out, urban-in	12.4	5.3	19.8	22.7	-5.7	32.5	11.0	6.0	17.1
Net out-migration...	0.1	-4.5	10.0	4.8	12.0	1.5	-0.3	-5.0	11.3
Rural-in, urban-out	11.1	37.9	2.2	11.1	37.9	2.2	1.5	-4.7	16.3
Rural-out, urban-in	1.5	-4.7	16.3				-2.3	-5.4	5.5
Rural-out, urban-out	-2.1	-5.2	4.7	-0.1	-1.8	0.9	-7.4	-7.4	
Rural-out ²	-7.4	-7.4							

¹ Classification of state economic areas by type of migration pattern was on the basis of the 1940 definition and classification of rural and urban population.

² State economic area containing rural population only.

areas with net in-migration gained a total of 1,550,000 persons through migration. Their rural population was increased by 1,271,000 persons and their urban population by 279,000 persons. Percentage increases were 6, 24, and 2, respectively (Table 3).

First, it may be noted that the concentration of areas of net in-migration was largely in the Great Lakes region. Areas of rural-in, urban-in migration were the metropolitan-oriented areas north, west, and south of Chicago; the Tippecanoe and Iroquois River area of northern Indiana; the Detroit metropolitan and satellite areas in Michigan; the Cleveland metropolitan and satellite areas; the Columbus and Cincinnati metropolitan areas; the middle-western group of counties in Ohio; the central Indiana area; the Louisville metropolitan area in both Indiana and Kentucky; the west-central Kentucky Knobs area; the St. Louis area; the Quad Cities area of southwestern Iowa and northeastern Illinois; and the Kansas City, Wichita, Lincoln, and Omaha metropolitan areas.

The areas of rural-in, urban-out migration included several in southern

Michigan; the northern Indiana and Fort Wayne areas; central and north-eastern Ohio; the Inner Blue Grass area of Kentucky; the Peoria and Springfield areas in Illinois; the Kenosha and Racine areas of Wisconsin; and the Kansas City (Kansas), Des Moines (Iowa), and Minneapolis-St. Paul (Minnesota) areas.

Only five economic areas—1 metropolitan and 4 nonmetropolitan—had a rural-out, urban-in migration pattern: the Evansville (Indiana) metropolitan area, the middle Wabash River area in Indiana, the eastern Iowa and north-western Illinois areas, and the south-western Kansas area.

The rural-in, urban-in pattern (30 areas) and the rural-in, urban-out pattern (29 areas) accounted for the bulk of the areas with net in-migration. Among the metropolitan areas, there were 20 of the rural-in, urban-in type and 18 with the rural-in, urban-out pattern. The nonmetropolitan areas of net in-migration were also about evenly divided between the two patterns, with 10 and 11 of each, respectively.

Most of the nonmetropolitan areas having the two principal types of mi-

TABLE 3. PERCENTAGE CHANGE IN POPULATION DUE TO NET MIGRATION, 13 NORTH CENTRAL STATES, BY RURAL AND URBAN RESIDENCE FOR METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS, 1940-1950, WITH AREAS CLASSIFIED BY TYPE OF POPULATION MIGRATION PATTERN

Type of migration pattern ¹	All areas			Metropolitan areas			Nonmetropolitan areas		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
	Per cent			Per cent			Per cent		
All areas	-1.5	-4.6	0.8	6.1	36.0	0.9	-7.9	-12.1	0.7
Net in-migration....	6.5	23.5	1.5	6.9	41.4	1.4	5.2	7.7	2.2
Rural-in, urban-in..	7.3	27.6	2.9	7.2	43.3	2.6	7.6	8.5	6.1
Rural-in, urban-out	5.8	26.2	-2.3	6.1	40.6	-2.3	5.0	12.5	-2.6
Rural-out, urban-in	1.8	-4.3	8.3	9.8	-14.0	18.1	0.8	-3.7	6.2
Net out-migration...	-11.4	-16.0	-1.3	-6.8	0.2	-9.7	-11.7	-16.5	0.1
Rural-in, urban-out	-0.5	26.0	-9.3	-0.5	26.0	-9.3	.....	.....	.....
Rural-out, urban-in	-9.4	-15.4	5.4	.....	.....	.....	-9.4	-15.4	5.4
Rural-out, urban-out	-14.1	-17.5	-6.7	-11.5	-13.5	-10.4	-14.3	-17.7	-6.1
Rural-out ²	-21.2	-21.2	.....	.....	.....	.....	-21.2	-21.2	.....

¹ Classification of state economic areas by type of migration pattern was on the basis of the 1940 definition and classification of rural and urban population.

² State economic area containing rural population only.

gration pattern are located in Michigan and central and northeastern Ohio. None are located west of the Mississippi River.

POPULATION CHANGE IN AREAS OF NET OUT-MIGRATION

The 109 areas of net out-migration, only 9 of which were metropolitan, approximated three-fourths of the total area of the region. (In Figure 1, this group is shown in the white and dot series.) In 1950, the areas included 41 per cent—compared with 45 per cent in 1940—of the population of the region. These areas lost through migration a total of 2,201,000 persons, 11 per cent of the 1940 population. The rural portions of the areas lost 2,122,000 persons (10 per cent), and the urban portions, 79,000 (1 per cent).

One area with no urban population, located in South Dakota, qualified in the rural-out migration category. The rural-in, urban-out migration pattern included two areas, both metropolitan—the Kentucky part of the Cincinnati metropolitan area and the Ohio part of the Youngstown metropolitan area.

Among the state economic areas of net out-migration, 56, all nonmetropol-

itan, had a rural-out, urban-in migration pattern. These areas include most of the Great Plains and the Corn Belt.

The 50 areas having the rural-out, urban-out migration pattern were concentrated largely in a broad belt along the southern border of the region and in the Cut-over territory along the northern border. A few scattered areas of this pattern were distributed throughout the West North Central Division of the region.

The data so far examined indicate a general trend toward concentration of population, through net in-migration, in the rural portions of the metropolitan areas and of their satellite areas, especially in the Great Lakes and central Ohio areas. This process has been going on for some decades, but the last decade was one of considerable acceleration of the movement. The process of suburbanization and rural infiltration by nonfarm-employed residents was especially pronounced in the older and larger metropolitan areas. The data indicate the role of migration in suburban growth and infiltration of rural areas, and the extent to which families and individuals increasingly

TABLE 4. CHANGE IN CRUDE BIRTH RATES IN 13 NORTH CENTRAL STATES, BY RURAL AND URBAN RESIDENCE FOR METROPOLITAN AND NONMETROPOLITAN STATE ECONOMIC AREAS, 1940-1950, WITH AREAS CLASSIFIED BY TYPE OF POPULATION MIGRATION PATTERN

Type of migration pattern ¹	All areas			Metropolitan areas			Nonmetropolitan areas		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
	Numerical change			Numerical change			Numerical change		
All areas.....	6.1	4.3	7.4	7.6	5.5	8.1	4.8	4.3	5.9
Net in-migration....	7.2	5.6	7.9	7.6	5.7	8.0	5.9	5.5	6.5
Rural-in, urban-in..	7.2	5.9	7.7	7.4	6.2	7.7	6.1	5.7	6.7
Rural-in, urban-out	7.4	5.1	8.5	8.1	4.9	9.2	5.6	5.1	6.3
Rural-out, urban-in	6.5	6.3	6.6	6.3	8.0	5.4	6.5	6.2	6.8
Net out-migration....	4.6	3.9	6.0	6.9	3.5	8.6	4.5	4.0	5.7
Rural-in, urban-out	7.5	2.2	10.0	7.5	2.2	10.0	.....	.....	.....
Rural-out, urban-in	5.3	4.9	5.9	.....	.....	.....	5.3	4.9	5.9
Rural-out, urban-out	3.8	2.9	5.5	6.5	4.9	7.4	3.6	2.9	5.2
Rural-out ²	8.1	8.1	.....	.....	.....	.....	8.1	8.1	.....

¹ Classification of state economic areas by type of migration and computation of change in crude birth rate was done on the basis of the 1940 definition and classification of rural and urban population.

² State economic area containing rural population only.

have their homes outside the incorporated areas and away from the administrative regulations of the city.

BIRTH RATES

Regarding reproductive differences in the population, it is well to inquire as to the relationship between migration patterns and birth rates.⁷

All the state economic areas had increases in crude birth rates during the decade, but there were substantial differences in the rate of increase. The rate for the region as a whole increased from 17.6 per 1,000 population in 1940 to 23.7 per 1,000 population in 1950, an increase of 6.1 per 1,000. The rural rate increased 4.3 and the urban, 7.4 (Table 4).

Quite striking is the fact that areas of net in-migration began the decade with a crude birth rate of 16.6 and ended with a rate of 23.8, an increase of 7.2, while corresponding rates for areas of out-migration were 19.0 and 23.6, an increase of only 4.6. The

greater increase in birth rates in areas of in-migration than in areas of out-migration held true within the rural and urban populations and the metropolitan and nonmetropolitan populations considered separately. It seems probable that the areas of in-migration receive high proportions of persons in the reproductive ages.

Among the areas of net in-migration, those with the rural-in, urban-out pattern had the largest increase in birth rate, 7.4. The rural-in, urban-in group had an increase of 7.2, and the rural-out, urban-in group had 6.5.

Among areas of net out-migration, the rural-out, urban-out areas started the decade with the highest birth rate and ended it with the smallest increase, 3.8, shown in any of the migration-pattern groups, either of the in-migration or the out-migration type. Except for the one area containing only rural population (which was unique with an increase of 8.1) the rural-in, urban-out areas had the largest increase, 7.5, just as they did among the areas of net in-migration. The rural-out, urban-in areas were intermediate, with an increase of 5.3.

⁷ The rates considered here are computed on the basis of births that occurred to residents of an area regardless of migration status rather than on the basis of a "closed" population.

Thus, the largest increases in birth rates over the decade occurred in the economic areas with net in-migration and particularly those showing rural in-migration. This held true generally for both metropolitan and nonmetropolitan areas. It is interesting to note that changes in the rural rates tended to be smaller in the areas showing the greatest increases in urban rates. This held true for the total rural and urban populations and for the populations of metropolitan areas, but not for the rural and urban populations of non-metropolitan areas.

CONCLUSION

The marked drift of population into industrial areas and the movement of industrial and urban populations into formerly rural areas was especially pronounced during the 1940-1950 decade and has continued since. The continued industrialization of the region,

especially its eastern portion, and the pronounced depopulation of some of its rural areas was quite striking. Contributing to this was the reduction in farm labor requirements resulting from greater farm mechanization and efficiency.

Such factors as the foregoing contributed markedly to the varied migration patterns in both the areas of in-migration and of out-migration, as well as to the differences in fertility behavior between and among the several migration-pattern groups.

This analysis points up the need for more investigation of the various demographic, social, and economic factors affecting migration and fertility and their relationships. Expanded study of the impact of suburbanization and rural infiltration on the established social structures and social relationships in the rural areas is needed.

THE RELATION OF FARMER CHARACTERISTICS TO THE ADOPTION OF RECOMMENDED FARM PRACTICES*

by C. Paul Marsh and A. Lee Coleman†

ABSTRACT

Previous studies have shown the relationship of certain farmer characteristics to the adoption of a single recommended practice or an index of practice adoption. Gross and Taves identified a series of factors that discriminated consistently in the same direction between adopters and non-adopters of a battery of practices, but the relationships were not statistically significant.

The present study of 393 farmers in a single Kentucky county relates 21 factors to the adoption of sixteen practices. On the basis of simple cross-tabulations, six of the factors were significantly related to the adoption of 14 or more practices, and 3 other factors were significantly related to at least 12 practices.

When the discrimination of three of the factors most strongly associated with adoption—socio-economic status, education, and contact with agency representatives—was further analyzed, with each of the three factors successively held constant, the relationships were somewhat less consistent. However, all relationships were in the same direction as in the simple cross-tabulations.

INTRODUCTION

In recent years, there have been several studies of the relationship between socio-economic characteristics and the adoption of new farm practices. Some findings of those published up to 1952 have been summarized as follows:

With a few exceptions these studies find that farm ownership, education, income, size of farm, and social participation are positively associated with the adoption of improved farm practices. The association of age with adoption is not definitely established. Several studies report that age is negatively associated with acceptance of certain practices, while no significant association of age with acceptance occurs for other practices. Unpublished data of Wilkenning's in North Carolina¹ show that age is negatively associated with the adoption of improved farm practices when certain other factors are held constant.²

Gross and Taves, in an Iowa study reported since the above summary was prepared, were unable to isolate any factors (out of 25 considered) that were significantly associated with the adoption of all ten practices studied. They did find, however, a series of factors that discriminated consistently in the same direction between adopters and non-adopters of all practices. They report: "In all instances, acceptors read more college bulletins than non-acceptors, participated more actively in community affairs, had larger farms, and moved less frequently after they began to farm; in addition, for each of the ten practices studied, a greater proportion of acceptors than non-acceptors balanced their farm accounts regularly, had children who participated in the 4-H and F.F.A. programs, and were participants in the A.A.A."³

*The investigation reported in this paper is in connection with a project of the Kentucky Agricultural Experiment Station and is published by permission of the director.

†University of Kentucky, Lexington, Ky.

¹Published later as *Acceptance of Improved Farm Practices in Three Coastal Plain Counties, North Carolina* AES Tech. Bull. 98 (Raleigh, 1952), p. 50.

²The Rural Sociological Society, Socio-

logical Research on the Diffusion and Adoption of New Farm Practices, report of the Subcommittee on the Diffusion and Adoption of Farm Practices (Lexington: Kentucky Agr. Exp. Station, RS-2, June, 1952).

³Neal Gross and Marvin J. Taves, "Characteristics Associated with Acceptance of Recommended Farm Practices," *Rural Sociology*, XVII:4 (Dec., 1952), pp. 321-327.

TABLE 1. RELATIONSHIP BETWEEN TWENTY-ONE FARMER CHARACTERISTICS AND FARMERS' ADOPTION OF SIXTEEN RECOMMENDED AGRICULTURAL PRACTICES

[+ = positive relationship; - = negative relationship; 1 = high adoption rate in middle groups; 11 = high rate in the lower and upper groups, but low rates in middle groups. All of these relationships are significant at the .05 level by chi-square test; 0 = no relationship that is significant at this level.]

Factor*	Practice**															
	1. Arti- social breed- ing	2. Farm rec- ords	3. Ter- rac- ing or con- tour- ing	4. Le- dino clover	5. Calf vac- cination	6. Ken- tucky 31 fescue	7. Chick pur- chase	8. Blue- stone- lime	9. To- bacco fertil- ization	10. Soil test- ing	11. Pullet flock	12. Cover crops	13. Phe- nothi- amine french	14. Phe- nothi- amine with salt	15. Swine sanit- ization	16. To- bacco vari- eties
1. Sewell Score	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2. Education	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3. Contact with agents	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
4. Farm Bureau activity	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
5. Reading farm bulletins	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
6. Value products sold	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7. Attending farm meetings	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
8. Size of operation (P.M.W.U.) ..	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
9. Social participation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
10. Reading agents' letters	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
11. Acres operated	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
12. Age	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
13. Years in farming	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
14. Information from friends	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
15. Farm radio programs	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
16. Residence outside county	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
17. Tenure	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
18. Number persons kin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
19. Exchange work	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
20. Number persons visited	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
21. Information from dealers	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Number of operators to whom the practice applied	379	393	345	393	379	393	364	385	385	393	371	366	149	149	247	367
Per cent who had adopted	13.7	13.0	20.0	25.4	27.4	24.9	57.4	60.0	63.9	23.2	24.8	73.4	59.7	59.1	53.4	86.9

•Explanation of factors:

1. Score on the Sewell Socioeconomic Status Scale (Short Form) (6 groups: 25-61, 62-68, 69-73, 74-77, 78-82, 83-90).
2. Number of grades of schooling completed (5 groups: 4 or less, 5-6, 7-8, 9-11, 12 or more).
3. Whether farm operator had talked with an agricultural agency representative (County agent, Soil Conservation Service technician, Farmers Home Administration representative, or Production Credit Association representative) in the two years preceding the interview (2 groups: yes, no).
4. Extent of participation in the Farm Bureau (3 groups: nonmembers, members who attend less than a fourth of the meetings, members who attend a fourth or more of the meetings).
5. Whether the farm operator had read one or more farm bulletins in the 2 years preceding the interview (2 groups: yes, no).
6. Value of crops and products sold during the year preceding the interview (4 groups: \$0-\$999, \$1,000-\$2,499, \$2,500-\$4,999, \$5,000 or more).
7. Whether the operator had attended a farmers' meeting of an agricultural agency in the 2 years preceding the interview (2 groups: yes, no).
8. Number of productive man work units (5 groups: 0-50, 100-150, 200-250, 300-350, 400 or more). (One productive man work unit = the acreage in crops or the number of livestock units of specific kinds which required the work of 1 man for 1 day a year. A farm with 100 p.m.w.d. requires 100 man-days of labor per year, on the average.)
9. Operator's score on the Chapin Social Participation Scale (5 groups: 0-4, 5-10, 11-15, 16-21, 22 or more).
10. Whether operator had read any of the circular letters sent out by the county agent in the 2 years preceding the interview (2 groups: yes, no).
11. Number of acres operated (6 groups: under 50, 50-99, 100-199, 200-299, 300-399, 400 or more).
12. Age of the operator (5 groups: under 35, 35-44, 45-54, 55-64, 65 or over).
13. Number of years the farmer had operated a farm (4 groups: under 5, 5-9, 10-19, 20 or more).
14. Whether farm operator had received any information on farming from friends or neighbors in the 2 years preceding the interview (2 groups: yes, no).
15. Whether farm operator had listened to any farm programs on the radio in the 2 years preceding the interview (2 groups: yes, no).
16. Whether farm operator had lived outside the county at any time (3 groups: had not lived outside, had lived outside in rural areas of Kentucky, had lived outside in other areas).

17. Tenure of operator (2 groups: tenants, owners and part owners; sharecroppers were not interviewed; all tenants are "operating" tenants).
 18. Number of families within the community (community defined by the respondent) who are kin (first cousin or closer) to the operator or his wife (5 groups: 0, 1, 2, 3, 4 or more).
 19. Number of families within the community (community defined by the respondent) with whom the operator exchanges work (5 groups: 0, 1, 2, 3, 4 or more).
 20. Number of families within the community (community defined by the respondent) with whom the operator or his family visit (5 groups: 0, 1, 2, 3, 4 or more).
 21. Whether operator had received farm information from dealers or salesmen in the 2 years preceding the interview (2 groups: yes, no).
- Criteria or definitions of adoption:
1. Has bred one or more cows artificially.
 2. Keeps complete farm records—receipts, expenditures, inventory, and production.
 3. Has any terraces or has ever cultivated any fields on the contour.
 4. Has ever planted any ladino clover.
 5. Has ever vaccinated for Bang's disease.
 6. Has ever planted any Kentucky 31 fescue.
 7. All chicks purchased from a hatchery and from one in Kentucky in the year preceding the interview.
 8. Has ever used the biestone-line treatment on tobacco beds.
 9. Used 1,000 pounds or more of mixed fertilizer per acre on tobacco in the year preceding the interview.
 10. Has ever had any soil tested.
 11. Kept all-pullet flock in the year preceding the interview.
 12. Planted winter cover crops on all cultivated land for the 3 years preceding the interview.
 13. Drenched sheep with phenothiazine at least once in the year preceding the interview.
 14. Gave sheep phenothiazine with salt at least part of the time in the year preceding the interview.
 15. Moved all brood sows to clean ground either before or just after farrowing in the year preceding the interview.
 16. Planted approved tobacco varieties in the 2 years preceding the interview.

THE PROBLEM

Except for the Gross-Taves study, almost all studies of the relationship between socio-economic characteristics and adoption of practices have been concerned with relationships between these characteristics and the adoption of a single practice or an index of adoption. As was the case in the Gross-Taves study, the present paper is concerned not only with the relationship of farmer characteristics to the adoption of individual practices, but also with the consistency with which the characteristics differentiate between adopters and non-adopters of a number of specific practices. Thus, the questions guiding the research were: (1) What socio-economic characteristics of farmers are related to their adoption of recommended farm practices? and (2) Are there characteristics that are related to the adoption of all or most practices; or do the characteristics that are related to adoption vary widely by practice?

STUDY LOCALE AND METHODOLOGY

The data analyzed here were obtained in 1950 from 393 farm operators in one Kentucky county. All farmers in 13 neighborhoods were interviewed. The neighborhoods were selected on a judgment basis to represent all areas of the county.

The county has a tobacco-livestock agriculture. Tobacco is the most important cash crop, but dairying and beef cattle and sheep are also important. The county is considered one of the "better" agricultural counties in the state.

The relationship of 21 factors to the adoption of sixteen practices was studied. These are shown in Table 1. The factors include status items, items reflecting exposure to potential sources of information, and items on social participation. The practices were selected to include a range of types of practices, and a range in the extent to

which each had come into general usage in the county.

Most of the analysis is based on simple cross-tabulations of each factor by adoption or nonadoption of each practice. Though the sample was not selected on a probability basis, chi-square was used in testing the null hypotheses implicit in the comparisons. A relationship was considered to exist only if chi-square was significant at the .05 level. (Tables 2 and 3 illustrate the way in which the 336 tables [21 factors times 16 practices] were set up.) Following the analysis of the simple cross-tabulations, the next step was to examine the relationship between certain of the factors and adoption, with some other factors held constant.

RESULTS OF SIMPLE CROSS-TABULATIONS

As may be seen in Table 1, a number of factors are associated with the adoption of most of the practices. One factor, score on the Sewell Socioeconomic Status Scale (Short Form), is related to the adoption of all sixteen practices studied. Two other factors—education, and having talked with an agricultural agency representative in the past two years—are associated with all but one practice. Three factors—Farm Bureau participation, having read one or more farm bulletins in the past two years, and the value of crops and products sold—are related to the adoption of all practices except two. These two practices—swine sanitation and planting approved tobacco varieties—account for all of the exceptions in the association of practices with the six top factors. The elimination of these two practices from the analysis could be rationalized, in that both are known to be rather poor discriminators. The first applies to an enterprise that is quite marginal in the area studied; most farmers, if they have hogs at all, keep only a very few for home meat purposes and pay relatively little

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TABLE 2. DISTRIBUTION OF FARM OPERATORS BY EDUCATION AND BY WHETHER THEY HAD USED THE BLUESTONE-LIME TREATMENT ON TOBACCO BEDS

Years of schooling completed	Whether bluestone-lime used		
	Total	Yes	No
	Per cent	Per cent	Per cent
4 or less.....(N = 78)	100	38	62
5-6.....(N = 68)	100	54	46
7-8.....(N = 148)	100	60	40
9-11.....(N = 39)	100	79	21
12 or more.....(N = 56)	100	84	16
All operators.....(N = 389)	100	60	40

$\chi^2 = 35.56$, degrees of freedom = 4; $P < .001$.

TABLE 3. DISTRIBUTION OF FARM OPERATORS BY WHETHER THEY HAD READ ANY FARM BULLETINS IN THE PAST TWO YEARS AND WHETHER THEY WERE KEEPING COMPLETE FARM RECORDS

Whether farm bulletins read	Whether keeping complete records		
	Total	Yes	No
	Per cent	Per cent	Per cent
No.....(N = 211)	100	4	96
Yes.....(N = 180)	100	24	76
All operators.....(N = 391)	100	13	87

$\chi^2 = 34.19$, degrees of freedom = 1; $P < .001$.

attention to them. The other practice—planting approved tobacco varieties—is something that almost everyone does (87 per cent of this sample). If these practices are not included, all six factors are significantly associated with all the remaining practices. For the county studied, then, the simple cross-tabulations indicate that adopters of recommended farm practices generally have a higher socio-economic status, are more likely to have personal contacts with agricultural agency representatives, are more active in the Farm Bureau,⁴ and sell more crops and products.

Three additional factors are associated with the adoption of at least twelve of the sixteen practices. These factors are: (1) having attended one or more farm meetings sponsored by

agricultural agencies in the county, (2) size of farm operation, as measured by productive man-work units, and (3) social participation, as measured by Chapin Scale scores.⁵ While the specific measures used in different studies vary, these nine factors that are most strongly related to practice adoption correspond generally to those identified by Gross and Taves and others. Certain partial exceptions are noted below.

None of the remaining factors are so consistently associated with the adoption of recommended practices as those so far mentioned, but certain other relationships may be noted. In other studies, age has been found to be

⁵ Since the participation score includes participation in the Farm Bureau, it is possible that the apparent relationship here reflects primarily the relationship between participation in the Farm Bureau and adoption.

⁴ The Farm Bureau is the only general farm organization in the area studied.

TABLE 4. DISTRIBUTION OF FARM OPERATORS BY SOCIO-ECONOMIC STATUS SCORE, CONTACT WITH AGRICULTURAL AGENCY REPRESENTATIVES, AND WHETHER OPERATOR HAD TESTED SOIL

Whether operator had tested soil	Operators with socio-economic status score of 73 or less (low)			Operators with socio-economic status score above 73 (high)		
	All (N = 202)	Contact with agents (N = 74)	No contact with agents (N = 128)	All (N = 189)	Contact with agents (N = 124)	No contact with agents (N = 35)
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Yes	12	18	9	35	41	15
No	88	82	91	65	59	85
All	100	100	100	100	100	100

$\chi^2 = 3.50$, degrees of freedom = 1;
 $P < .05$.

$\chi^2 = 9.44$, degrees of freedom = 1,
 $P < .01$.

negatively associated with the adoption of some practices and unrelated to the adoption of others.⁶ In the area covered by this study, age of operator is related to the adoption of 7 of the 16 practices studied; this relationship is similar to that found in other studies. In each case where there is association, the highest rate of adoption is in the age group under 35 or the 35-44 group.

In contrast to most other studies,⁷ the Kentucky data indicate no significant relationship between farm ownership and the adoption of practices, for the most part. On the two practices for which there was a relationship between tenure and adoption, tenants had higher adoption rates than owners.

The findings of the present study relative to the association between size of farm operation and adoption are in line with those of previous studies. As noted above, two indices of size of operation (value of crops and products sold, and number of productive man-work units) are positively related to the adoption of almost all of the practices studied. Another measure, number of acres operated, is less consistently related; there is a positive relationship between this factor and

nine of the practices, but it is negatively associated with swine sanitation.

There is wide variation in the extent to which farmers' contact with each of the various sources of farm information is related to practice adoption. As noted above, talking with agricultural agency representatives and reading farm bulletins are positively associated with the adoption of 14 practices, and attending farm meetings is related to the adoption of 13 practices. Reading the circular letters sent out by the county agent is related to the adoption of 11 practices. By contrast, there is no consistent and significant relationship between adoption and contacts with most other sources—receiving farming information from friends and neighbors is significantly associated with the adoption of only 4 practices, listening to farm programs on the radio with only 3, and receiving information from dealers with none of the 16 practices.

RESULTS OF CONTROLLED ANALYSIS

Since many of the factors considered are intercorrelated, the relation of three of them—education, socio-economic status, and contact with agricultural agency representatives—to the adoption of each practice was examined with each of the other two factors held constant (successively, not simultaneously). Table 4 illustrates

⁶ Cf. *Sociological Research on the Diffusion and Adoption of New Farm Practices*, op. cit.

⁷ *Ibid.*

TABLE 5. ASSOCIATION OF ADOPTION OF EACH OF SIXTEEN PRACTICES WITH SOCIO-ECONOMIC STATUS, EDUCATION, AND CONTACT WITH AGRICULTURAL AGENCY REPRESENTATIVES, WHEN EACH VARIABLE IS SUCCESSIVELY CONTROLLED

[+ = positive relationship significant at the .05 level by chi-square test; 0 = no relationship that is significant at this level.]

Independent variable*	Control category	Practices**															
		Arti- ficial breed- ing	Farm rec- ords	Ter- rac- ing or con- tour- ing	La- dio vac- clover	Cult vac- nation	Ken- tucky 31 fescue	Chick par- chase	Blue- stone lime	To- bacco fertiliz- ation	Soil test- ing	Pullet flock	Cover crops	Phos- pho- ric lime drench	Phos- pho- ric lime with salt	Swine san- itation	To- bacco varie- ties
Socio- economic status	8 grades or less of schooling	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0
	More than 8 grades of schooling ¹																
	Contact with agents	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0
	No contact with agents	1	0	1	+	+	0	+	+	0	0	0	+	+	0	0	0
Education	Socio-economic score of 73 or less ¹																
	Socio-economic score above 73	+	+	+	+	0	+	0	0	0	+	0	0	0	0	0	0
	Contact with agents	+	+	+	+	+	+	+	+	+	+	+	0	0	0	0	0
	No contact with agents ¹																
Contact with agency representa- tives	Socio-economic score of 73 or less	1	0	1	+	0	+	0	+	0	+	0	0	0	0	0	0
	Socio-economic score above 73	+	+	+	+	0	+	0	0	0	+	+	0	0	+	0	0
	8 grades or less of schooling	+	+	+	+	+	+	+	+	+	+	+	0	0	+	0	0
	More than 8 grades of schooling ¹																

*See footnotes to Table 1 for a description of the variable. The groupings on each variable were as indicated in the control category.

**See footnote to Table 1 for a description of the practices and the definitions of adoption.

¹Too few cases for analysis.

how the tables were set up. Even though all variables were made dichotomous, there were too few cases for comparison within certain control categories. For example, since only 11 of the respondents with more than eight grades of schooling had a socio-economic score of 73 or less and only 14 of the respondents with more than 8 grades of schooling had not talked with an agricultural agency representative, no analysis involving these groups was attempted.

As may be seen in Table 5, the results of this analysis are not nearly so clear-cut and consistent as were those of the simple cross-tabulations. However, socio-economic status is consistently related to adoption in two out of three control categories; among farm operators who had completed only eight grades or less of schooling, and among those who had talked with an agricultural agency representative, this factor is positively related to adoption of each of the 14 principal practices. Among farmers who had not talked with an agricultural agency representative, however, there is a significant relationship between socio-economic score and adoption of only 6 practices.^a

Education is significantly associated with adoption of only 6 practices among farm operators with a high socio-economic status. Among operators who had talked with an agricultural agency representative, however,

education is significantly associated with the adoption of 11 practices.

Within the group with only eight grades or less of schooling, having talked with an agricultural agency representative is related to adoption of 13 practices; but among farmers of high socio-economic status this factor is significantly associated with the adoption of only 8 practices, and among those of lower status with only 4.^b

CONCLUSION

On the basis of the simple cross-tabulations, then, a series of six factors discriminate between adopters and non-adopters of at least 14 of the 16 practices studied, and several other factors have fairly high discrimination. Although the specific measures differ, there is a general correspondence between these factors and those identified by Gross and Taves and others. However, when the discrimination of three of the top-ranking factors (socio-economic status, education, and contact with agency representatives) is further analyzed, with each of the three successively held constant, the relationships are somewhat less consistent. While the data do not permit a definitive conclusion, it is noteworthy that all of the relationships in the controlled analysis are in the same direction as in the simple cross-tabulations. Replication of this and other similar studies, using a larger number of cases, would seem to be indicated.

^a For 2 practices there were too few cases for analysis, and 2 other practices are the marginal ones previously commented on; so this may perhaps be regarded as association of 6 out of 12 practices.

^b For 2 practices in this control category, there were too few cases for analysis.

RESEARCH NOTES

"REGION"—AN HEURISTIC CONCEPT

by Julian H. Steward†

This paper maintains that the concept of *region* must be an heuristic construct which is relative to field of interest and problem and therefore has a special meaning in each case. It cannot represent any inherent features of objective reality that may be defined in absolute and universal terms. The different phenomena according to which regions are variously defined are in all cases distributed over the earth's surface, but they are conceptualized very differently. The implications of some of these conceptualizations, especially of some of the evident discrepancies between those employed in the physical, biological, and behavioral sciences, merit certain general observations.

First, however, it should be noted that the distinction between "area" and "region" has never been sharply defined. The author's survey of the problems and scope of territory covered in cultural studies by area institutes leads him to believe that sheer size is the primary difference. Area studies tend to deal with whole continents or with major portions of continents, such as East Asia, South Asia, the Near East, Africa, Scandinavia, and Russia. They may deal with individual nations, but more often they cover several nations which have a similar way of life or culture. Thus, while Brazil, Argentina, and Mexico may each be treated separately because of certain localized interests and problems, Latin America as a whole is the subject matter of many area institutes because of a presumed common denominator, a behavior represented by the prevalence of the Iberian cultural heritage. Such delimitation is comparable to anthropology's division of the pre-Columbian world into "culture areas"—areas in which the primitive societies shared fundamental cultural features, whether or not the individual societies were integrated politically, economically, and socially in larger sociocultural systems.

Region seems most often to designate territorially delimited subcultures within modern nations. These are also conceived, however, as *culture areas*, since they are delineated according to the distribution of a particular way of life or value system. Popular and broadly significant examples of regions of the United States are New England, the South, the Midwest, etc. But

regions so conceived lend themselves only to descriptive analysis. They are not readily amenable to scientific analysis which endeavors to relate regions of distinctive behavior to causal factors.

At least three principal causes or explanations of regional differences may be advanced. First, the cultural-historical explanation ascribes behavior patterns to past history or cultural tradition, but it does not explain the origins of the various traditions. Thus, many regions of the United States are distinctive because of their ethnic minorities, such as Italians, Scandinavians, Germans, and Japanese. If the origins of the culture of each such group are traced historically in the home country, they are usually presented in terms of particulars which, according to the assumptions of cultural relativity, are presumed to be unique in each case.

Second, while the weight of cultural tradition is of course enormous, any society must adapt its way of life to the patterns entailed in exploiting a particular natural environment by means of a culturally prescribed productive technology. The adaptive processes, here called "cultural ecology"—not to be confused with human, social, or urban ecology—are creative ones. Many disciplines have spent years of research on different factors relevant to regional cultural differentiation. Some of these do not involve human behavior *per se*, but the phenomena treated are of interest to human beings and may be incorporated in explanations of cultural patterns. Maps of geological formations serve not only the purposes of historical geology as a distinct discipline but are essential in identifying regions where such products as minerals, oil, coal, and uranium may be found. These maps, together with topographic maps, help one understand regions of soil types which may constitute major subjects of investigation themselves. Soil types, in combination with climates and vegetation, are of obvious importance to problems of human settlement and land use. The United States Department of Agriculture has made special maps of land use. These and the geographers' basic resource and production maps of various parts of the world should certainly provide a foundation for understanding the cultural-ecological factors that enter into regional cultural differentiation. However, there is still a considerable gap between regions defined in physical and economic

†University of Illinois, Urbana, Ill.

terms and those defined in value or ethos terms.

Third, in the contemporary world a regionally distinctive way of life represents not only the heritage of antecedent cultures and the effects of local cultural-ecological adaptations but also the influences from the national-level and even international-level institutions of the larger sociocultural systems of which it is a structural-functional part. That is, a nation is a great deal more than the sum total of its subcultures. In addition to various subcultural groups based upon regional, occupational, status, ethnic, and other differences, there are national economic, political, military, and other institutions which influence each local group somewhat differently. Thus, regional subcultures must be understood in relation also to world trade, markets, growing industrialization, and expanding governmental controls and services.

The writer, therefore, would conceive *region* as a locally distinctive way of life or subculture which acquires its characteristics not only from the cultural-historical tradition and from particular adaptations to the local environment but also from its relationship to the larger society or sociocultural system. This does not mean, however, that a region is a territory of cultural uniformity, a cultural subarea in which all persons share the same behavior patterns. Partially differing ways of life will characterize town and rural populations—the former related to marketing, distributing, and servicing functions and the latter to various roles in the agrarian productive system. There will be landlords, workers, sharecroppers, peasants, merchants, teachers, police, governors, bankers, and many other functionaries. A word of caution concerning the urban-rural dichotomy is in order. In highly industrialized nations

which have advanced education, transportation, and mass communications, the subcultural differences between city and rural dwellers are diminishing. This is not to say that subcultural differences are being leveled. If appropriate studies were made, they would probably show that subcultures are increasingly related to occupations.

The writer offers the present concept of *region* as an heuristic device for both descriptive analysis and scientific explanation of localized subcultures. The view that a region, like a primitive culture area, is unique in its culture patterns, value system, ethos, and outlook is simply a form of cultural relativism that precludes fruitful cross-cultural comparisons. While the inhabitants of particular regions undoubtedly share a substantial cultural common denominator and certain attitudes, they are also internally differentiated along subcultural lines. Analysis of these subcultures in relation to the natural environment, productive technologies, and national institutions will help to identify the factors that shaped them. By a comparative method, it would then be possible to relate subcultural types to causative factors in several parts of the world and thereby to establish a basis for prediction of culture change under specific conditions.

A typology of subcultures that may be found in different parts of the world would seem to be the logical and simple beginning toward identification of causal factors. It is probable, however, that modern regions will lend themselves to cross-cultural classification. In the coexistence of several fundamentally similar subcultures that have the same functional interrelations with one another, regions in widely separate parts of the world may well be typologically identical. These, however, are questions for empirical research.

APPLIED SOCIOLOGY NOTES

ON CLIENTELES OF THE AGRICULTURAL EXTENSION SERVICE*

by Wayne C. Rohrer†

"Know your audience" is one of the dicta of propagandists and advertisers. This paper, which is concerned with delineating clienteles of the Agricultural Extension Service within value-orientation and attitude frames of reference, is directed toward this goal. In Gibson's research¹ and in a recent extension report² the term "clienteles" embraces all farmers or rural persons in a given area. Kolb and Brunner, following Wayland's "A Study of Social Patterns of Farming," suggested that there are clienteles, rather than a single clientele, for extension programs.³ The present paper stands in this continuity with perhaps a more substantial relationship to the Kolb and Brunner position.

The following analyses may be useful in the work of research and extension personnel in rural sociology.⁴ Also, delineating clienteles should be generally useful in an expanded extension program or in redirecting present programs. The analyses here fall in the category of secondary

analysis as the term is developed by Kendall and Lazarsfeld.⁵

Data utilized in this paper were collected for two studies made during 1953-54. One was a "knowledge and participation study" carried out in Cecil County, Maryland (hereafter referred to as the "Cecil County study") and the other a "meeting evaluation study" (hereafter referred to as the "meetings study").⁶

In both studies, extension employees collected the data; respondents were limited to white farm operators; and respondents were grouped into two classes prior to field work. Cecil County farmers were classified by whether or not their names appeared on the county agent's mailing lists. Names randomly selected from these mailing lists constituted the sample of "participating farmers." The sample of "nonparticipating farmers" consisted of names randomly selected from the county Production and Marketing Administration's list of farmers (after excluding names of extension participants).⁷ In all, 141 completed interviews with farm operators—91 participants and 50 nonparticipants—were obtained.⁸ Data collection in the meetings study was accomplished by interviewing, in each of three counties, a random sample of farm operators who had attended the 1954 annual county dairy-agronomy meeting. Each farmer attending these meetings was asked to supply the name of a farmer

*Contribution No. 2572, Maryland Agricultural Experiment Station, Department of Sociology.

†University of Maryland, College Park, Md.

¹D. L. Gibson, "The Clientele of the Agricultural Extension Service," *Michigan AES Quarterly Bulletin*, XXVI:4 (May, 1944). Gibson's descriptive term "clienteles" is elaborated in this paper.

²Meredith C. Wilson, *Extension's Coverage of Its Clientele*, Extension Service Circ. 401 (Washington, D. C.: USDA, 1954).

³John H. Kolb and Edmund deS. Brunner, *A Study of Rural Society* (4th ed.; Boston: Houghton-Mifflin, 1952), pp. 63-65. Kolb and Brunner summarize Wayland's study and suggest that "obviously each type [of farming pattern] will require different sorts of educational assistance from an extension service." Both Wayland's and Gibson's researches dealt largely with socio-economic variables, rather than with social-psychological variables as used in this paper.

See also, Edmund deS. Brunner and E. Hsin Pao Yang, *Rural America and the Extension Service* (New York: Teachers College, Columbia University, 1949), p. 165. In this publication, the authors briefly elaborate on the same theme as expressed by Kolb and Brunner.

⁴E.g., clientele delineation may have a substantial relationship to "acceptance of practices" studies. It appears that in acceptance studies the focus is on specific identifiable practices, with users of the subject matter as a dependent variable. In clientele delineation, the focus is on users; and subject matter is a dependent variable. It would seem that the two frameworks might be integrated methodologically, with profit.

⁵Patricia L. Kendall and Paul F. Lazarsfeld, "Problems of Survey Analysis," a chapter in *Continuities in Social Research*, edited by Robert Merton and Paul F. Lazarsfeld (Glencoe, Ill.: The Free Press, 1950), pp. 133-134. Specifically the authors state: "Many studies grow out of practical needs. Only after they have served their pragmatic purposes can they be explored for whatever theoretical context they contain. In these circumstances, then, secondary analysis becomes very important. It is essentially an effort to extract from given empirical data the maximum of theoretical generalizations."

⁶The latter is reported in detail in: Kenneth L. Coombs, "Agricultural Extension Meetings as a Medium for Farm Information" (unpublished Master's thesis, University of Maryland, 1954). Both studies were made under a Maryland AES project in sociology.

⁷In view of the sources used, one might consider the terms designating the farmer classes as too inclusive. However, in the analysis of the Cecil County data, there were statistically significant differences between the two categories in this classification scheme, in many subject areas relevant to extension.

⁸For a complete accounting of the data collection experience, see Wayne C. Rohrer, *The Extension Service in Cecil County, Maryland*, AES Misc. Pub. No. 216, University of Maryland (mimeo.; College Park, Sept., 1954).

TABLE 1. IDEAS OR HELP RECEIVED FROM COUNTY AGENT WORK:
REPLIES OF 48 PARTICIPANTS AND 17 NONPARTICIPANTS
WHO SAID THEY RECEIVED HELP*

Participants in extension				Nonparticipants in extension			
Idea or kind of help	Frequency of mention			Idea or kind of help	Frequency of mention		
	Number	Per cent	Rank		Number	Per cent	Rank
Weed or insect control	19	19	1.0	Weed or insect control	5	16	1.0
Pasture improvement or management....	16	16	2.0	Artificial breeding, dairy herd im- provement	4	13	3.0
Seeding rates or mixtures	13	13	3.0	Livestock manage- ment or production	4	13	3.0
Fertilization or liming	12	12	4.5	Soil testing.....	4	13	3.0
Conservation prac- tices	12	12	4.5	Conservation prac- tices	3	9	6.0
Crop production or varieties	7	7	6.0	Crop production or varieties	3	9	6.0
Artificial breeding, dairy herd im- provement	5	5	7.5	Seeding rates or mixtures	3	9	6.0
Soil testing	5	5	7.5	Pasture improve- ment or manage- ment	2	6	8.5
Livestock manage- ment or production	3	3	9.0	Fertilization or liming	2	6	8.5
Other, or couldn't specify	8	8	.....	Other, or couldn't specify	2	6	.....
Total.....	100	100	.....	Total.....	32	100	.....

* $Rho = -.22$. (T. C. McCormick, *Elementary Social Statistics* [New York: McGraw-Hill, 1941], pp. 191-192.)

who did not regularly attend.⁹ Non-attenders names were then listed, and a randomly selected number equal to the number of attenders selected for that county were chosen for interview. Data collection yielded 48 completed interviews with attenders and 50 with non-attenders.

The first section of this paper deals with Cecil County farmers' verbalizations of ideas accepted from county agent work. The assumption here that the acceptance of ideas involves value orientations is in accord with the report *Sociological Research on the Diffusion and Adoption of New Farm Practices*.¹⁰ The second section of the pa-

per uses data from the meetings study, on farmers' expressed preferences for new subject matter. It is assumed these preferences indicate motivations and that motivational data have reference to value orientations.¹¹ If these assumptions are granted, the data utilized from the two studies may be analyzed within a value-orientation frame of reference. In the third section, Cecil County farmers are categorized into provisional clienteles to establish whether attitudes expressed toward county agents' efforts differ between clienteles.

EXTENSION PARTICIPATION OR NONPARTICIPATION AND IDEA ACCEPTANCE

Cecil County farmers were asked if, during the past two years, they had received

⁹ The wording of the schedule item was as follows: "Please give us the name and address of someone who lives near you who has a farm or business like yours but who is not here today and who doesn't usually attend these meetings."

¹⁰ Report of the Subcommittee on the Diffusion and Adoption of New Farm Practices, The Rural Sociological Society (Kentucky AES Report RS-2, Lexington, Ky., June, 1932). See Section B, "The Differential Acceptance of Farm Practices as a Function of Socio-Cultural Systems," p. 7. Under hypotheses suggested, the authors state that "the

acceptance of specific practices varies with the extent to which they are consistent or inconsistent with the dominant values and basic 'themes' of the system."

¹¹ Talcott Parsons and Edward A. Shils (eds.), *Toward a General Theory of Action* (Cambridge, Mass.: The Harvard University Press, 1952), Pt. 2, chap. 1, p. 54.

TABLE 2. FARMERS' PREFERENCES FOR NEW SUBJECT MATTER:
REPLIES OF 37 ATTENDERS AND 28 NON-ATTENDERS OF EXTENSION MEETINGS WHO EXPRESSED PREFERENCES*

Attendees of extension meetings				Non-attendees of extension meetings			
Subject matter desired	Frequency of mention			Subject matter desired	Frequency of mention		
	Number	Per cent	Rank		Number	Per cent	Rank
New fertilizer or fertilization practices	11	19	1	New fertilizer or fertilization practices	8	22	1.5
Farm buildings	9	15	2	Weed and insect control	8	22	1.5
Labor saving and efficiency**	8	14	3	Crop production or varieties	3	8	3
Weed and insect control	6	10	4	Dairy health problems	2	6	5.5
Crop production or varieties	4	7	5.5	Grass silage	2	6	5.5
Improved pasture	4	7	5.5	Improved pasture	2	6	5.5
Irrigation	3	5	7	Milk prices	2	6	5.5
Dairy health problems	2	3	9	Farm buildings	1	3	9
Milk handling	2	3	9	Irrigation	1	3	9
Milk prices	2	3	9	Milk handling	1	3	9
Grass silage	1	2	11	Other	6	15	.....
Other	7	12	.....			
Total	59	100	.....	Total	36	100	.....

* $Rho = +.41$. (T. C. McCormick, *Elementary Social Statistics* [New York: McGraw-Hill, 1941], pp. 191-192.)

**Because labor saving and efficiency was mentioned only by attendees, this item was eliminated in obtaining the rank correlation. For purposes of the statistical test, attendees' items were re-ranked.

any ideas or help from county agent work. Forty-eight (53 per cent) of the participants and 17 (34 per cent) of the nonparticipants gave a positive reply (C.R. = 2.20).¹² Those who obtained ideas or help were asked to specify two or three ideas received. Because of this limit, a complete census of acceptances was not obtained. The replies are summarized in Table 1.

Nine ideas or kinds of help were mentioned by the respondents in the two groups. The participants mentioned pasture improvement, seeding rates or mixtures, fertilization or liming, and conservation practices more often than the nonparticipants. The nonparticipants mentioned artificial breeding and herd improvement, soil tests, and livestock management and production more often than the participants. Both groups mentioned weed or insect con-

trol and crop production or varieties about equally often.¹³

PARTICIPATION OR NONPARTICIPATION IN EXTENSION MEETINGS AND ORIENTATION TOWARD NEW SUBJECT MATTER

In the meetings study, farmers were asked if they wanted "to know more about some of the new developments in agriculture they had read about," and they were asked to specify the new ideas. As a means of stimulating responses, the enumerator mentioned four new developments suggested by extension supervisors: liquid nitrogen, chemical weed control, pipeline milkers, and pole barns. Eleven of the attendees (22.9 per cent) and 22 (44.0 per cent) of the non-attendees indicated no interest in new developments or made no response (C.R. = 2.27). The new subject

¹² See T. C. McCormick, *Elementary Social Statistics* (New York: McGraw-Hill, 1941), pp. 296-297, for formula for significance of difference between two proportions.

¹³ During the previous two years, the county agent had emphasized programs on the following: cleaner milk, dairy building, forage, mastitis control, artificial breeding, and dairy herd improvement. Experimental plots were used to demonstrate insect control, clover diseases, and corn fertilization and varieties.

matter listed (Table 2) shows that attenders had more interest than non-attenders in farm buildings, labor saving and efficiency, and irrigation. Non-attenders indicated more interest than attenders in weed and insect control, crop production and varieties, dairy health problems, grass silage, and milk prices. Fertilizers and fertilization, and improved pastures were mentioned by both groups with about equal frequency.

FARMERS' ATTITUDES TOWARD ACCEPTING IDEAS FROM COUNTY AGENT WORK

An additional content analysis was made of the Cecil County data. The schedules were sorted into five categories, based on (1) whether or not the farmer had had contact with the county agent during the previous two years, (2) whether or not he had accepted ideas from the county agent during this period, and (3) whether the ideas accepted were those associated with extension participation or with nonparticipation.¹⁴ The 13 farmers who reported no contact were eliminated, as were also the 13 who accepted only ideas that were not wholly categorizable as to association with participation or nonparticipation. This left 115 farmers in three categories—35 who accepted only ideas associated with participation (participant-acceptors), 15 who accepted only ideas associated with nonparticipation (nonparticipant-acceptors), and 65 who accepted no ideas (non-acceptors).

The answers of these three groups to an "open-ended" comment question relating to contact with county agent work and acceptance of ideas are listed below:¹⁵

Participant-acceptors (35 farmers):

- I make more use of extension than the county agent is aware of.
- I see the county agent at all meetings.
- I see how other farmers do their work.
- I watch other farmers in the community.
- I see farm ponds on other farms.
- I was the first to spray for spittle bugs.
- I have observed spray operation of local farmers and have seen the results of its effectiveness.

¹⁴ The chi-square test was applied to data in Table 1 to obtain association between participant-class and items.

¹⁵ The series of questions asked of farmers:

During the past two years did you get any ideas or help from county agent work that you used? Yes () No ()

a. What were two or three ideas? _____

b. Now, can you tell me where you got the idea of _____?
Comment: _____

I saw the bugs in the field—could see the damage they were doing.

Nonparticipant-acceptors (15 farmers):

I test my soil, and so forth, because I know it's the best way to get good production.

I get lots of ideas from the county agent.

Non-acceptors (65 farmers):

I have been farming for many years. I would contact the county agent if problems arose.

I don't care for book farmers—experience is the thing. The county agent is doing a good job, but I won't use him. I can't farm by the book.

I have little contact with the agent, due to the fact that other farmers need him more than I do. I would use him if the need arose.

I had a bad experience with an agent about 20 years ago. He [the agent of 20 years ago] couldn't help me.

I was never one to ask advice.

The agent doesn't always see the farmer's point of view.

I don't have any problems. I would contact the agent if any arose.

We haven't had a good agent since Mr. Miller left [about 15 years].

I have been using good farm practices for more than 2 years.

The county agent never helped me with anything.

A rough content analysis of the above comments provides insight into differential attitudes of the groups toward county agent work. The participant-acceptors who commented may be characterized as farmers alert to innovations in farming; more specifically, they observe. They observed other farmers' operations and experiences and the condition of their own operations. Moreover, their comments suggest, they objectively sought solutions to conditions they observed. Most of the non-acceptors who commented may be characterized as farmers who considered their idiosyncratic experiences adequate to carry on farming. They had no problems. They saw no present difficulties needing solution. They recognized the purpose of county agent work but, unless an unmanageable problem developed, they felt they had adequate knowledge to pursue farm operations.¹⁶

¹⁶ Cecil County homemakers also were interviewed in this study. In response to a question regarding problems in the areas included in home demonstration work, 23 per cent of the members of homemakers clubs said they had no problems and 43 per cent of the nonparticipants said they had none. These responses are more or less in line with those received from farmers.

There were too few of the nonparticipant-acceptors—and too few of their comments—to provide much insight into this group.

CONCLUSIONS AND IMPLICATIONS

Although the differences between classes of farmers disclosed in the foregoing analyses are not statistically significant, they are sufficient to suggest further research. Due to their secondary nature, the analyses contain only suggestive evidence for hypotheses. In Merton's terms, the hypothesis that the *Agricultural Extension Service* has at least three clienteles has "plausibility," and should be further tested.

The first clientele—or perhaps potential clientele—includes farmers who lack an orientation toward contemporary programs in agricultural education.¹⁷ These farmers accepted no ideas from county agent work or knew of no ideas about which they wanted more information. To develop farmers of this kind from a potential to an actual clientele for extension, their orientation toward contemporary agricultural education programs must be changed. Probably "new extension approaches" suggested by Przedpelski et al.—approaches in which extension agents personally assist these farmers in result demonstrations and other self-help farming efforts—constitute the best way to change this negative orientation.¹⁸

A second clientele includes farmers oriented toward accepting "new ideas" but whose conception of a new idea probably differs from the extension worker's conception. This is suggested by the greater emphasis some nonparticipating acceptors placed on soil testing, artificial breeding and herd improvement, and crop production. These farmers recognized the need for applying science to farming, but perhaps we can infer that the assistance they need lies with what might be termed "basic" farm practices. Insofar as extension

agents recognize and attend to the "basic" interests of these farmers, no doubt the latter will increasingly apply research findings in their farm operations. If extension agents are not sensitive to the interests of this group, farmers of this clientele may revert to the "non-acceptor" category.¹⁹

A third clientele includes farmers who are oriented toward accepting new ideas and whose conception of a new idea is consistent with the extension worker's conception. These participating acceptors constitute the aggressive seekers after new knowledge and techniques.²⁰ These are "progressive farmers" in extension parlance. Farmers of this clientele have literally incorporated the extension program into their farm operation, and the county agent is a resource to them. Possibly the interests of farmers in this clientele have loomed too large in establishing extension programs. Extension workers sensitized to the differing orientations of other farmer-clienteles may build into extension programs safeguards which preclude domination of extension content by a single clientele.

If this hypothesis is tested and found valid, the following appear to be some of the lucrative areas for research: (1) The relationship of clientele-membership to subject-matter content, to accepting improved practices, to differential interest in planning extension programs, and to actual or potential participation in activities of this agency; (2) comparative studies of the constitution of clienteles for programs of other adult education agencies and for allied efforts (4-H, Homemakers) in the *Agricultural Extension Service*. Knowledge of clientele-membership would also be methodologically useful in designing researches on the *Agricultural Extension Service*.

¹⁷ E.g., see the fourth comment of the non-acceptors listed above.

¹⁸ One county agent told the writer that many farmers learn of new research applications before the agent does, and call on him merely for confirmation of the soundness of these new ideas. Another agent suggested these farmers want an appreciative and discriminating audience for their achievements. The expressions by these agents suggest that an anomalous quality attaches to high rationalism in farming—namely, that farmers who are abreast of the agent in technical ability "don't need" him for subject-matter knowledge but rather for his psychological support. They actually resemble, to a degree, non-acceptors who "didn't need the agent's help." This type of investigation obviously lies outside the scope of this paper.

¹⁷ For a study of a similar clientele, see Boleslaw J. Przedpelski, George W. Hill, Douglas Ensminger, and Emil A. Jorgensen, *New Approaches for Agricultural Extension in Problem Areas*, Extension Bull. 1, University of Wisconsin, College of Agriculture (Madison, Wis., 1952), p. 3.

See also, Eugene Wilkening, *Acceptance of Improved Farming Practices in Three Coastal Plain Counties*, North Carolina AES Tech. Bull. 98 (1952), esp. pp. 56-57, concerning the relevance of agricultural education to carrying on farm operations, as expressed by farmers in different "acceptance" classes.

¹⁸ Przedpelski et al., op. cit., pp. 17-20.

BOOK REVIEWS

Edited by Eugene A. Wilkening

PREPARED FOR THE SEPTEMBER ISSUE

Freedom in Agricultural Education—A Documented Study of the State of Educational Freedom in Tax-Supported Colleges of Agriculture. By Charles M. Hardin. Chicago: University of Chicago Press, 1955. Pp. 275. \$4.50.

The institutions of higher learning in the Scandinavian countries and in Great Britain, and those few in the United States within which academic freedom is a reality, have long been the envy of liberal faculty members of the state-supported schools. Hardin's treatise was prepared for the Commission on Financing Higher Education, which was established by the Association of American Universities. The author, a political scientist, presents a broad historical view of events and processes working for and against the development of freedom of investigation and exposition in our land-grant colleges and universities and in the United States Department of Agriculture.

The Iowa margarine incident—which was precipitated by the claim in a college pamphlet that "properly fortified margarine 'compared favorably' with butter in nutrition and palatability"—is related. Similar incidents in other institutions are detailed. Also described is the manner in which southern senators, whose real objectives were those of changing the USDA's role in the adjustment of cotton prices, used the sociological report "Cultural Reconnaissance of Coahoma County, Mississippi" to emasculate the Bureau of Agricultural Economics. In fact, the reviewer knows no single source which so well describes and documents the events and forces which have been marshalled in attack and counter-attack as academic freedom has inched ahead since the founding of the land-grant colleges and universities and the United States Department of Agriculture.

"Agricultural research and Extension workers operate in relation to their clientele with an intimacy which is difficult for their more cloistered colleagues to understand" (p. 7). "But the price of intimacy is identification and the college cannot escape it" The dilemma of " . . . the college of agriculture in confronting controversial issues will grow, for its obligation to deal with such issues presumably varies in direct proportion to their seriousness, and so does the tendency to identify (and to be identified) with one party to the

controversy" (p. 114). The dilemmas posed in research, teaching, and extension are illustrated in dozens of examples.

The conservatism of the administrators and staffs of the colleges of agriculture, and the impossibility of their not participating—and the USDA's not participating—in controversial issues is demonstrated. Perhaps the greatest contribution of the book is the overwhelming evidence and proof that the provision of federal funds and the cooperation of federal agencies with the colleges have on the whole not exerted partisan pressures. On the other hand, in many instances federal agencies have protected scientific standards and objectives and kept local power groups from power-motivated particularism and "pork barrel" tactics. The power struggle between the governmental bureaus established by the Democratic administration during and following the depression years, on the one hand, and the colleges of agriculture supported by such farm organizations as the American Farm Bureau, on the other, is detailed.

The descriptive detail of the book should furnish a challenge to the analytical sociologist who is attempting to study the processes of institutionalization. Thus, when the University of Wisconsin developed the "Wisconsin Idea" early in this century, and this, after initial success in service to the state, was "plowed under" by the "conservative reaction of 1914," G. H. Mead remarked: "It is in the study of such incidents that we realize the growth that is going on underneath the surface of society. The University has become a part of the people of the state And the unfavorable political conditions of the last year could not materially affect this life and growth" (p. 71).

This treatise is not a sociological analysis, and its author is content with the suggestion that political pressure may be resisted by such "institutional devices" as constitutional governing boards, advisory councils with specific functions, and research foundations. He concludes that, "No ivory towers exist for agricultural researchers and Extension workers on the public payroll. For them, academic freedom is not a moat but a shield and buckler which they themselves must largely fashion and keep in repair" (p. 113). The sociologist will

find in this report little evidence of support for his field. Physical and natural scientists fear his activities will jeopardize their budgets; politicians fear his research will turn up injustice, embarrassing to powers friendly to them; and some administrators believe in playing it safe by de-emphasizing controversial subjects. It appears that the sociologists who may work in these institutions have a selfish as well as a general interest in fashioning the "shield and buckler" of academic freedom. At least, it seems to the reviewer that the sociologist should attempt to understand the institutional processes required for the maintenance of academic freedom better than he does at present.

CHARLES P. LOOMIS.

Department of Sociology and Anthropology,
Michigan State College.

Origin of the Land Tenure System in the United States. By Marshall Harris. Ames: Iowa State College Press, 1953. Pp. xiv + 445. \$7.50.

This volume deals chiefly with land tenure processes of America during the Colonial period. Its purpose is to provide a better understanding of our present land tenure structure by reference to its antecedents. The general thesis is that, "The present-day tenure system . . . is largely an outgrowth of the concepts that the English colonists brought with them to America, as changed during the Colonial period" (p. viii). The author attempts to show how the changes in these practices are related, among other things, to the kind of people who came to this country; to our frontier; to our contemporaries in England and on the Continent; to our soil, climate, and topography; and to our Christianity, emerging democracy, and rising capitalism.

To explore these relationships the author covered a wide scope of original, documentary sources—more than two hundred and fifty of which are listed in the volume. Comprising twenty-one chapters, the time span covered is from Feudal England down through our own Revolution. Major subjects are: the nature of land tenure; English feudal tenure (two chapters); conflicting claims in the new world; the nature of colonial grants and government (five chapters); tenure as related to original grants; Indian land; trading companies; the head-right system of granting land; sale of land; special-purpose grants; the New England land system; land companies; the national land system (two chapters); the Revolutionary period; and a concluding chapter

entitled, "Some Antecedents of Public Land Policies and the Tenure System."

Considering its detail, the book reads remarkably well. Some of the chapters include an "Interpretive Summary," in which the author gives a rather free and candid analysis of certain matters which might well remain obscure otherwise, due to the complexity or fragmentary nature of the data. Categorical statements in a study of this kind are admittedly hazardous. For example, the question is raised in several places as to the influence, if any, of the American Indian on our land tenure system. Says Harris, "Not one single attitude, principle, or concept as to the relations among men in regard to land was taken from Indian tenure" (pp. 176-177). Subsequently he observes, however, that, "Even though nothing was borrowed from Indian tenures, the quitting of the claims of the Indians to the land had its effect" (p. 177). The further explanation is that in view of the colonist's observations of the unscrupulous practices of some of the settlement agencies in "separating the Indian from his land" (p. 177), it is not surprising that they, the colonists, "squatted upon unallocated land rather than pay the purchase price set by the settlement agencies and that they revolted against burdensome quitrents" (p. 178). Or again, one might cite the obvious complexity of assessing cause-and-effect relationships between English feudalism and American tenure, when many of our forefathers left England to escape the feudalism in question (p. vii).

Although not a sociological treatise—the central focus is "rights and not men nor land" (Preface ix)—the book contains much of interest to rural sociologists. The concepts, as such, are not used; but there is much information on such matters as social institutions, cultural change, social ecology, social organization, community, and many other items.

In the final chapter, some of the influences on American land policy are indicated under three major headings, as follows: (1) *From the original thirteen states*, the irregular pattern of farm boundaries, the New England town system, family-sized farms (and also large grants), the Dutch patroon system, and ground rent and quitrents. (2) *Cautionary contributions of a negative nature*, as the avoidance of haphazard land settlement such as the British government followed, and the avoidance of holding land under common ownership as was done at Jamestown and Plymouth. (3) *Federal land policies derived from colonial experience* include the rectangular

system of land surveys, the granting of land bounties, the sale policy, the preemption plan, and the homesteading system. A final section of this chapter discusses English feudal practices in the colonies, some of which "were changed only slightly, even under conditions in Colonial America. Still others either were changed radically or disappeared entirely" (p. 402).

The author, long recognized as an outstanding student of land tenure, is to be congratulated on his resourcefulness and patience in bringing together in such a well-coordinated and interesting style the vast amount of original material presented in this volume. It can but be good reading to anyone who is interested in the fundamentals of our American heritage, and it is certain to become a standard reference in the field of land tenure.

HAROLD HOFFSOMMER.

Department of Sociology,
University of Maryland.

Social Class and Social Mobility in a Costa Rican Town. By Sakari Sariola. Turrialba, Costa Rica: Inter-American Institute of Agricultural Sciences, 1954. Pp. vi + 136. No price given.

The present work is one of a series of research projects growing out of and based in part upon the initial basic research of this reviewer in Costa Rica, 1948-49. As such, it is related to material appearing in *Studies in Applied and Theoretical Social Science*, by Charles P. Loomis (1950); *Readings in Latin-American Social Organization and Institutions*, edited by Olen Leonard and C. P. Loomis (1953); and *Turrialba*, by Loomis, Leonard, Julio Morales, and Roy Clifford (1954); as well as to articles by this reviewer.

This particular report, by Sariola, represents an intensive analysis of the social class structure of the town of Turrialba, the largest of the twenty-four localities included in the basic research project.

The development of the instrument—described in the appendix of the present report as the "questionnaire used"—was begun by this reviewer while at Michigan State College, in 1947, and completed in Costa Rica with the able assistance of Martha Coll Camalez, in 1948. This questionnaire serves as a common basis for the reports of Sariola, Loomis, Morales, etc.

The present volume begins with a general description of the town of Turrialba. Following this, the objectivistic, subjectivistic, and cultural approaches to the study of social class are discussed before turning

to the classificatory approach which serves as the basis for the present investigation.

The dimensions originally selected as the basis of the analysis were social distance, activities, sentiments, and material facilities. During the course of the study, however, these four aspects of measurement were regrouped with the consideration of status proceeding along the dimensions of socio-economic status, occupation, prestige, and sociometric status.

The analysis of the class structure in Turrialba begins with the selection of 19 local judges to rate the heads of the 146 family units (included in the 1948 basic research project) as to their social standing. Their rating resulted in 142 "identified" heads of families being placed in four different classes—upper class, upper-middle class, lower-middle class, and lower class.

This reviewer questions the methodology at this point, inasmuch as Turrialba (population, 6,359) is divided into several subcommunities and close acquaintance beyond the limits of these subgroupings is limited. Moreover, for a town of its size, there is considerable mobility and resultant anonymity among those of the lower classes. The additional factor of the time elapsing between completion of the questionnaires and the judges' ratings serves to complicate further the methodology. The question that arises is: Were the judges' ratings based upon a personal knowledge of these individuals or upon casual acquaintance, hearsay, and such external symbols as their occupations, part of town lived in, type of house, clothing worn, et cetera? To the extent that these latter factors are involved, the ratings do not constitute an additional and separate dimension for evaluating status, but serve rather as a reiteration of other dimensions.

The 142 schedules identified by the judges were next analyzed as to the characteristics of the heads and their families, including such items as income, age, nationality, education, housing and household equipment, social activities, and their informal interpersonal relationships as ascertained through a series of seven sociometric questions. The analysis of the social distance dimension was based upon the data revealed through these sociometric criteria.

Upon completing the analysis of the 142 identified schedules, the author assumed that he had made an exploratory study along the four original dimensions. Though the evaluation proved revealing, analysis of the class structure was handicapped by the lack of sufficient cases in the upper classes for purposes of comparison. The number

of families in the different classes, therefore, was made approximately equal by the inclusion of additional heads of families in the two upper classes, and the elimination at random of some of the families in the lower classes.

The resultant sample consisted of 99 families with whom interviews were completed covering such items as the use of money, furnishings, diet, clothing, cultural and health practices, etc. The heads of these 99 family units were also subjected to the judges' rating technique, this time by nine judges ranking those they knew in individual rank order according to prestige.

On the basis of information obtained in this latter analysis, the four-class system postulated from the exploratory study was revised and three societal poles—upper, middle, and lower class—were assumed to constitute the matrix of the class structure in the community.

In this reviewer's opinion, the present study provides an interesting analysis of class structure and should provide an additional source of reference for the study of Latin-American sociology. However, since the reviewer's name is conspicuously absent from the bibliography and since his schedule and basic research form an integral part in the development of this study, the action of Sariola and his advisors in neglecting to add this one other name to the bibliography becomes incomprehensible—particularly in view of the fact that the schedule and methodological procedures pertinent to the administering of the schedule and analysis of the data are copyrighted as a part of the reviewer's Ph.D. dissertation.

REED M. POWELL.

Department of Sociology,
University of Oklahoma.

The Western-Educated Man in India: A Study of His Social Roles and Influence.
By John Useem and Ruth Hill Useem.
New York: The Dryden Press, 1955.
Pp. xiii + 237. \$3.00.

Less than two hundred students from India were enrolled in American schools in the period just before World War II. In 1953-54, in spite of the devaluation of the rupee (which drives up traveling and living costs for Indians coming to the United States) and in spite of restrictions on dollar expenditures which India has been obliged to impose on her nationals, 1,486 Indians were engaged in study in educational institutions of this country. This is all the more remarkable when actual costs are considered. According to the Useems, the

mean annual expenditure of an Indian studying in the United States at the present time is approximately Rs. 12,500 (\$2,625). And it must be remembered that the average annual per-capita income in India is about Rs. 275, or \$55. Evidently, considerable individual and national sacrifice and ardent sponsorship are involved here; and strong and important motives must be at work. Under the aegis of the Edward W. Hazen Foundation, with Michigan State College as co-sponsor and in co-operation with the Social Science Research Council, John Useem (of Michigan State College) and his wife, Ruth, spent the year 1953-54 investigating the background and consequences of this interest on the part of Indians in education in the West.

Actually, the Useems' book is based on the responses of 110 men and women living in eight cities and towns of Bombay State who were educated in England and in the United States between 1935 and 1951. Members of regional groups of the State (Gujarat, Maharashtra) and minority groups (Muslims, Jains, Christians) are included in the sample. These people now hold positions in government, privately owned industries or businesses, academic institutions, and private welfare agencies.

A Western education, according to this study, has apparently not been a royal road to wealth and recognition for the Indian. Most of those in the sample fall into the middle section of the middle class with regard to income. It took those without influential relatives about a year to find a permanent job. Less than 10 per cent were able to find positions in their fields of specialization. Of those sent by the Indian Government to the West for education, 55 per cent are not employed in work intimately related to the training they received. Because of the highly centralized power of decision in Indian governmental and business organizations, the Western-educated person often finds it impossible to influence policy or present his ideas and techniques, and comes to feel that little use is likely to be made of his exceptional educational opportunities. Moreover, foreign education is not now as much esteemed as was the case under British rule.

Prevailing, the members of the sample felt that they had gained in self-confidence as a result of foreign experience and education, and that their personal aspirations were higher than would otherwise be the case. How reliable these self-assessments are is a question. Higher education is so valued in India that the acquisition of it from anywhere might have this effect. At

least half of the respondents reported that their venture abroad had made them "more Indian," rather than less, in outlook. They had seen weaknesses as well as strength in Western culture; and, on a comparative basis, they had come to a new appreciation of Indian values which they had long taken for granted. While most of the group subscribe to values of Western culture—such as the spirit of freedom, the rule of law, and the dignity of man—when it comes to specifics on which Indian and Western policy clash in the modern world, such as neutralism, these Western-educated persons overwhelmingly support the Indian official position. In fact, the criticisms of the West and of the United States which come from these respondents, though they are not exaggerated to the extent that they are by others, are of the same general type. They lament loose family ties and morals and frequent divorce, discrimination against colored races, materialism, McCarthyism, and an unacceptable foreign policy.

This thoughtful, objective, and informative book ends with a series of recommendations. One is that preference be given to older, employed candidates when applications for foreign education are reviewed. These are the people who are likely to be purposeful and who will be in an official position to act on the basis of their knowledge upon their return. It is also suggested that Western-educated individuals of promise be considered for grants-in-aid to be used in India, which would enable them to continue interests and research stimulated by their foreign experience.

MORRIS E. OPLER.

Department of Sociology and Anthropology,
Cornell University.

Tobati: Paraguayan Town. By Elman R. Service and Helen S. Service. Chicago: University of Chicago Press, 1954. Pp. xxix + 337. \$7.00.

This book is intended primarily for American (U.S.A.) anthropologists, and not for rural sociologists. It relates in an able manner the round of life of a local community to that of the little-known nation of which it is a part. The usefulness of the volume would have been enhanced if even the small amount of basic information available regarding the physical, economic, and social geography of the country and its position with regard to its neighbors had been more adequately and clearly summarized. There is little indication of the influence of these factors on the historical and cultural development. Such a presentation would have helped dispel the im-

pression that culture is thought to occur in a vacuum in which man alone exists.

Some anthropologists are apparently discovering that no major aspect of human activity can be isolated from others, but they seem to be doing so to a large extent independent of the experience in other fields where such knowledge has become commonplace. Although the functional relationship between different segments of life is indicated in this study, there is still some unnecessary adherence to traditional anthropological cataloguing.

Major attention is given by the authors to refuting what they call "The Guarani Myth," or a conception that the culture of the Paraguayan people is strongly influenced by the original Indian population. Others who have lived in the country do not agree that the Paraguayans possess such a reasoned and widely diffused belief in the strength of their Indian heritage. There undoubtedly does exist considerable interest in tracing back such relationships and in strengthening ties with the past, but this appears to rest to a considerable extent upon certain felt and unfelt psychological needs, such as that of wanting to defend their identity as a people. There is evident neglect in this instance as well as others of the psychological aspects of the phenomena depicted and analyzed; and it would seem that the function and reason for the existence of a devotion to Guarani ancestry has been inadequately explained.

It is the conclusion of the authors that the culture of the peoples who preceded the Spanish conquerors was almost completely replaced. But the evidence presented is not at all conclusive in this respect. Neither the cultures of the native Indian pre-conquest inhabitants nor that of the sixteenth and seventeenth century Spanish colonizers have been sufficiently explored to make this clear. It is quite possible that there were many more parallels between them than is generally recognized. A contribution has nevertheless been made to the study of the adjustments which have taken place between various cultures in colonial Latin America. A methodological contribution lies in the use of existing historical documents as sources of information of a socio-anthropological nature.

One of the major divisions of the book is devoted to a description of the economy of the local community and of its larger national setting; but many readers will wish that anthropologists would give more attention to describing and analyzing economic processes and the factors making for development or lack of it. The absence of

an active market is given as a major cause for the existence of subsistence agriculture; but reasons why trade is not vigorously carried on locally, nationally, or internationally are not given.

ROBERTO CUBA JONES.

Villa Jones,
Chilpancingo 23,
Mexico City, Mexico.

Interviewing in Social Research. By Herbert H. Hyman, with William J. Cobb, Jacob J. Feldman, Clyde W. Hart, and Charles Herbert Stember. Chicago: University of Chicago Press, 1954. Pp. xvi + 415. \$8.00.

The authors are all prominently identified with the National Opinion Research Center, a leading survey organization with a large, nation-wide, interviewing staff. If you buy this volume because the title and authorship lead you to expect a primer of interviewing, a "cookbook" which stresses techniques, you'll be disappointed; but if you buy the book because you've seen the subtitle on its dust jacket and are looking for "A Systematic Analysis of Sources of Error in the Interview," the chances are high that you'll think the investment of eight dollars and several hours of slow reading is decidedly worth while. For this is a thorough *methodological* work, in the primary sense of that much-abused word. Although one may be made unhappy now and then by what in perspective are minor faults—such as repetitious phraseology, a few straw men (junior grade), more than a touch of NORC parochialism, and "surprise" conclusions from qualitative data which can hardly be new to the many methodologically oriented survey researchers who themselves have had extensive field interviewing experience—the services by Hyman and his associates to theory, and hence to practice, are substantial. In developing a sensible model of the whole interview process and the data it yields in the context of over-all sample survey design—via an insightful examination and organized review of a host of relevant researches (many of them conducted by NORC) and via discriminating use of social-psychological conceptions—in differentiating a variety of potential sources and loci of error and preliminarily assessing their relative impact on interview data—useful guides to practice emerge logically.

A listing of some of the contents of *Interviewing in Social Research* will indicate how the book can be of help in selecting and training interviewers, distributing their

assignments over the designated sample, formulating questions, and so on. (Hyman is rarely if ever doctrinaire; the realities of large-scale survey administration are kept in mind when methodological standards are proposed.) Thus, we are reminded: (1) how much our conceptions of the nature of attitudes and the conditions under which they are validly elicited (such as "good rapport" and "deep probing") influence our evaluations of interview material (Many of these established conceptions are effectively challenged.); (2) that many "interviewer errors" arise because functions are given the interviewer which properly belong to standardized procedures and could be avoided by detailed question explanations and carefully pretested questionnaires of better design; (3) that the effects of interviewer-respondent personal interaction have been overstressed (Many professional interviewers are primarily "task-oriented," and many respondents detachedly view the situation as an impersonal one.); (4) that cognitive factors within the interviewer which may result in biased elicitation, understanding, recording, or classification of responses are: (a) expectations as to how someone in the respondent's status-role should respond, (b) expectations as to the consistency of respondent attitudes—the "people are all of a piece" fallacy, (c) expectations as to the distribution of some characteristic among the respondents, (d) the interviewer's own "ideological" views on the issue in question. [The first three factors probably have more influence than "ideological" views, but their effect varies with question form and content, and with the difficulty of the interview situation arising from poorly constructed questionnaires or from personality traits.] The final chapter discusses devices for reducing, controlling, and measuring error. The total impression one gets is that interviewers contribute far less to total survey error than had been feared.

What is offered, then, is a set of orientations toward interview problems, not a set of prescriptions. These orientations, of which the above are a sample, are significant for all personal interviewing in the social sciences, not just for survey work. The overworked cliché is applicable: this is a long-awaited and long-needed work.

BURTON R. FISHER.

Department of Sociology,
University of Wisconsin.

Social and Psychological Factors Affecting Fertility, Vol. 4. Edited by P. K. Whelpton and Clyde V. Kiser. New

York: Milbank Memorial Fund, 1955.
Pp. v + 286. \$1.00.

This is the fourth book of papers from the now famous Indianapolis study on human fertility. The first three appeared in 1946, 1950, and 1952; a fifth volume is anticipated to complete the series. As with the previous volumes, papers are reprinted from *The Milbank Memorial Fund Quarterly* and are presented in the order of their appearance there rather than in logical sequence. Most of the generalizations derive from very careful hypothesis-testing and they apply, in the majority of instances, to an adjusted sample of 1,444 "relatively fecund" couples.

Following are some illustrative findings, selected and abbreviated to fit the space limits of this review: Contraception was found to be 92 per cent effective (with "relatively fecund" couples who "always" used it). Contraceptive practice tended to shift to the more effective methods over the marriage period. Upper economic classes showed lower-than-average pregnancy rates during periods when contraception was practiced, due both to more effective methods and to greater proficiency in use. For husbands and wives who came from families of identical size, there was a slight positive relationship between the family sizes of the two generations considered. Size of planned family was found to be inversely related to ego-centered interests in children, such as in the case of over-mothering. Also, size of planned family was found to be negatively related to fear of pregnancy, though this relationship all but disappeared when the analysis was limited to fertile couples. Families exhibiting intergenerational upward mobility were found to be more regular in contraceptive practice and to be smaller than nonmobile families of comparable status. Similarly, fertility was found to be disproportionately low in intragenerational mobile families (considering those who moved upward in income or occupation subsequent to marriage).

Thus far, materials from the Indianapolis fertility study have been presented as separate reports, with "only a limited amount of synthesis and organization of the empirical results" (p. 953). Nevertheless, a final integrated report is promised, and in the volume under review there is one paper which might be regarded as something of a "progress report" along this line. Total, partial, and multiple correlations were used to analyze numerous factors as they relate to family size and success in family planning. Of the factors studied, feeling of eco-

nomic security was found to exert the greatest influence on size of planned family, and socio-economic status upon success in planning family size.

Our understandings of social and psychological factors affecting human fertility have been greatly enlarged by this study. Though there have been certain shortcomings in conceptualization and measurement, these have been freely recognized in the reports, and many fruitful suggestions for further investigation into the problem have been given. From the "leads" provided by this study, future research is already being planned.

HAROLD T. CHRISTENSEN.

Department of Sociology,
Purdue University.

The TVA. By Gordon R. Clapp. Chicago: University of Chicago Press, 1955. Pp. xi + 206. \$3.50.

This book is based on the author's Walgreen Foundation Lectures delivered at the University of Chicago. It is an expression of the basic administrative theories of the writer and the TVA management with which he worked for twenty-one years.

TVA is not a governmental instrument opposed to private enterprise, but rather an instrument designed to stimulate such enterprise. In the field of public power its role has been to provide competition with private utilities—a challenge that has had significant results, as the facts marshalled in the book so fully prove.

TVA is identified as a new administrative device, having its locus in the region in which it operates, and combining in its functions responsibilities traditionally possessed by the federal government but not customarily assumed by one agency. It is thus both a method of decentralization and integration. The regional approach is a new device for dealing with natural resources which do not conform to man-made boundaries.

The account of the technical and managerial decision within TVA to refuse to "trim its sails" on recommendations for building the Douglas Dam during World War II is given by the author as an illustration of a basic principle of good administration. In this instance, the TVA Board in the face of political pressure continued to back the technical judgment of its engineers. The author does not question the final authority of Congress to make decisions in such matters; but he does insist on the responsibility of the public administrator to give the soundest advice possible,

never wavering in his adherence to this policy.

The experiences of TVA in working with state and local governments in the development of regional research, of forestry resources, and of electric services are used to illustrate the agency's approach in building effective "partnership" among levels of government. An important corollary of this approach has been the provision of stimulation followed by withdrawal of resources when local responsibility has developed.

The discussion of a national power policy, following a substantive treatment of the seriousness of the perennial problem of power shortage, should disarm opponents of the type of public power advocated by the author. While adhering to the principle of the spur of competition by public power as an essential element of such a policy, the author, drawing on his long experience in the power field, offers certain positive suggestions for overcoming the conservatism of private power companies in expanding to meet electric power demands arising from security requirements and growth of the nation's economy. These suggestions are (1) government guarantees for possible losses resulting from over-expansion and (2) supplying of capital by the federal government in the form of second-preference stock without voting rights.

If one wants a concise and realistic account of TVA operations, some of the more significant results, and the administrative principles behind it all, this little volume should meet his requirements.

The author makes no apology for being pro-TVA, stating candidly his "belief in the wisdom and feasibility" of the TVA Act, a phrase from the oath of office of the Authority's directors. Anyone who has been associated with TVA is aware that the solutions to problems of regional development have not always been easy. As the former director points out, there have been controversies in which the people in the area and TVA have been involved, but the important achievement has been that "these and hundreds of other problems have been the subject of discussion and negotiation."

For conscientious government employees in a time when public employment sometimes means loss of status, this book provides encouragement by showing that government operations can be managed efficiently and economically, and that a sense of responsibility is no monopoly of either private or public employees.

FRANK D. ALEXANDER.

Division of Agricultural Relations,
Tennessee Valley Authority.

Utopia and Experiment. Essays in the Sociology of Cooperation. By Henrik F. Infield. New York: Frederick A. Praeger, 1955. Pp. 320. \$3.50.

Co-operatives: The British Achievement. By Paul Greer. New York: Harper & Brothers, 1955. Pp. xiv + 171. \$3.00.

Here are two books on the subject of co-operatives which represent contrasting content and approach. The volume by Infield, with an emphasis upon scientific techniques of study, ranges among a variety of experimental enterprises, from cooperative farms in Saskatchewan and Israel to industrial cooperatives in China and France. The report by Greer is a popularly written account of the solidly established British co-operative movement, with the frankly stated purpose of inspiring and reforming. Both books will have their publics, although Infield's is perhaps of more importance to the professional sociologist.

Utopia and Experiment is the first volume in the "International Library of the Sociology of Cooperation," a project which involves collaboration among scholars in eight countries and publishers in four. The United States representation is provided through the Group Farming Research Institute, of which Infield is director. (Infield is also co-author with Koka Freier of the second volume in the series, *People in Ejidos*.)

Decrying philosophical utopianism, Infield is concerned with the "genuinely sociological experiments" of modern cooperative communities. Part I of the book describes specific cases. The greater contribution researchwise is made by Part II, which recounts the results of applying a battery of tests to some of the communities. The battery includes the sociometric test, a test of "cooperative potential," a test to determine capacity for overcoming obstacles, and the biographical group interview. Important, too, are the therapeutic effects of the study process itself, opening up possibilities for "sociological counselling."

Much of the material in these essays has already appeared in published form elsewhere. Hence the book's chief use may be to introduce people to the general subject. Discussion groups, college classes, and readers served by libraries of cooperatives will find it a convenient collection. The international aspect of the venture may be of service in that it identifies some of the non-United States agencies and individuals who have an interest in cooperative organization. A number of typographical errors mar an otherwise attractive format. There is no index.

While the cooperative communities studied by Infield usually involve relatively small numbers of people, the book by Greer depicts British cooperatives as large as the London Cooperative Society, with its 1,150,000 members and 1,200 trading points. Some useful insights are given by the author, a journalist, based upon his own observations and his interviews with numerous cooperative leaders in Britain.

One is impressed with the way in which the co-ops have kept abreast of consumer needs, spreading from the supply of groceries to the kinds of services provided by convalescent homes and resort hotels. The extent to which advertising, installment buying, and "politicking" have emerged is a far cry from the 1844 ideas of the Rochdale pioneers.

Topics of special interest to sociologists include the relationship of farm and city co-ops in Britain, the contrast between Scottish and English practices, the extensive educational programs, and particularly the role of cooperatives in a welfare state.

The book is heavily saturated with opinion and is not without clichés, but it does contain substantial information and conveys admirably the spirit of modern British cooperation.

COURTNEY B. CLELAND.

Department of Social Science,
North Dakota Agricultural College.

Main Street on the Middle Border. By Lewis Atherton. Bloomington: Indiana University Press, 1954. Pp. xix + 423. \$6.00.

This book is a cultural and economic history of midwestern country towns from 1865 to 1950. Territorially, the setting includes the states of Ohio, Indiana, Illinois, Missouri, Michigan, Minnesota, Wisconsin, and Iowa, and the eastern farming fringe of Kansas, Nebraska, and the Dakotas. Country towns were those which were primarily service centers for farmers, and with few exceptions they were places of less than 5,000 population and outside standard metropolitan areas.

Sources of data for a historical study of this kind are of interest to sociologists. The formidable task was undertaken of reading "all the reminiscences, autobiographies, and novels depicting the region and period of which I am writing." The author also thinks that he has seen virtually all of the magazine articles and scholarly studies on his subject. In addition, at least one country newspaper was checked in each of the eight states wholly included in the study area, and nothing from newspapers was

used which was not confirmed in more than one paper. Among the scholarly studies of the area used were a good number of sociological researches.

Not only the industry of reading such a mass of material, but especially the manner in which the author handles these data, must be admired. He appears in full control at all times and brings from this wide range of literature an integrated picture of life, philosophy, and technology in country towns at an earlier time and up to the present. Such writers as Thorstein Veblen, Hamlin Garland, Sherwood Anderson, Mark Twain, Herbert Quick, Sinclair Lewis, and William Allen White parade across the pages contributing their views on small-town life. To bring these strong personalities to bear upon the discussion without having them dominate it is no small task. Atherton steps between the cynicism of Edgar Lee Masters and Sinclair Lewis and the nostalgia which Zona Gale had for small-town life and comes up with a fondness for the imperfect child which, he hopes, even yet may grow out of its shallow youth.

Life in midwestern country towns has changed over the years, not only technologically, but ideologically and morally as well. No student or casual observer of rural life would deny this, and sociologists will not quarrel generally (although perhaps as to details) with Atherton's account of changes. In fact, he has depended heavily upon rural sociological research for his description of the contemporary situation. What may be of special interest to sociologists is the carry-over from the past to present-day small-town life. The final chapter may cause some differences of opinion unless (and this is doubtful) Atherton's discussion has quieted controversy on the desired future of rural life.

Here are some of the things this reviewer liked most in the book: The author is at his best when talking about the ideals and philosophy of midwestern country-town people during the earlier years of development. The description of the general store (Atherton has written in detail on this subject previously) is one of the best; changes in merchandising with the introduction of packaged and branded products, are shown to be part of the changing rural life. The content of McGuffey's reader is analyzed as an expression of the small-town code, and changes and hold-overs in the newer readers are noted. The details on Chautauqua are good. It is described as offering midwestern audiences the opportunity "to feel superior and cultured with-

out being bored in the process" (p. 324), and, as midwestern tastes became more cosmopolitan, the Chautauqua lost appeal and died an inglorious death (p. 329). The account of the Garland family's life on the Middle Border is an example of the restlessness of the society then and the inability of a talented man to find satisfaction in country life or to break away successfully.

The style of this book is good; there are a number of well-chosen illustrations. It should be especially attractive for outside reading assignments. Those who are interested in the study of the small town or changes in rural life will find it valuable for background material.

EDWARD HASSINGER.

Department of Rural Sociology,
University of Missouri.

Family, Marriage, and Parenthood. (2nd edition.) By Howard Becker and Reuben Hill. Boston: D. C. Heath and Company, 1955. Pp. x + 849. \$6.25.

This is the second edition of a widely used text in the field of domestic relations. The editors of *Family, Marriage, and Parenthood* have coordinated the writings of a number of scholars—specialists in the various areas—into a volume of excellent scope and completeness. The work of these authors contributes to the accuracy and profoundness of treatment, which is partly counteracted in effectiveness by a long and abstract introductory chapter, and by certain overlapping of treatment inherent in any volume of edited writings.

This book, which has been written primarily as a text, begins with a section devoted to the family as a developing institution in a social frame of reference. The background of family life and the various forms of family association are considered, both prehuman and human. The history of the family is traced as it developed in the various cultures from the past to the present, with American family life today as the focus.

Parts Two and Three deal with the Institution of Marriage. Part Two will be of special interest to young people because it considers the factors which prepare people to marry—physical, personal, and social. This is followed by Part Three, on "Marriage Interaction," which discusses many of the adjustments the newly married partners will need to make in their new status in the community.

Part Four deals with the problems of "Parenthood and Family Administration." This group of chapters considers the coming of the child into the family circle and the

opportunities and responsibilities of parenthood. The use of money and the administration of the home as a social unit are discussed. Religious influences, a topic often omitted in the discussion of social problems, is considered in a chapter headed "Religion in Family Life."

Family crises are the theme of Part Five. These are of particular interest because they so frequently come unexpectedly, without the members of families having made preparations to meet them. This section should be of special value to all readers in calling their attention to the various crises which families must face.

Part Six, which is the last section of the text, deals with the possible changes in the family that may take place in the future. This section appears to have been written more for the student and administrator in society than for the general reader. The final chapter, "Plans for Strengthening Family Life," by Reuben Hill, contains an excellent summary of the materials covered and a prospectus for further strengthening the family.

With the exception of a tedious beginning, some overlapping of discussion, and a length of more than eight hundred well-filled pages, this is an excellent book that fulfills very well the "double-barreled" purpose for which it was written—to serve as a textbook and a book for the general reader. Used judiciously, it is an excellent text; for the casual reader, it can be a useful source book of information in the area of domestic relations. Both editors and authors are to be commended for producing a book which is comprehensive, sound, enlightening, and for the most part very interesting.

WAYNE T. GRAY.

Department of Sociology,
Fairmont State College, West Virginia.

The Government and Administration of New York. By Lynton K. Caldwell. New York: Thomas Y. Crowell Co., 1954. Pp. xviii + 506. \$5.95.

The Government and Administration of Florida. By Wilson K. Doyle, Angus McKenzie Laird, and S. Sherman Weiss. New York: Thomas Y. Crowell Co., 1954. Pp. xv + 444. \$4.95.

The Government and Administration of Mississippi. By Robert B. Highsaw and Charles N. Fortenberry. New York: Thomas Y. Crowell Co., 1954. Pp. xiv + 414. \$4.95.

The Government and Administration of Wyoming. By Herman H. Trachsel and

Ralph M. Wade. New York: Thomas Y. Crowell Co., 1954. Pp. xiv + 381. \$4.95.

These volumes are the first in the new American Commonwealths Series edited by W. Brooke Graves, a leading authority on state government. The plan for the series calls for separate but parallel studies of the governments of each of the forty-eight states and four major territories. In the editor's words: "Working together as members of a team, [the authors] are attempting, in many states for the first time in the history of the state, to present a complete description and analysis of state governmental institutions and procedures on a sound scholarly basis." The initial fruits of this enterprise are evidence that the undertaking is in thoroughly competent hands.

Of the four books, Caldwell's on New York undoubtedly will command widest interest, not only because of the high quality of the study itself, but also because our most populous state has been a successful pioneer in the improvement of many elements of state government. Part One of this volume embraces nine chapters on the broad "frame of government" and includes one chapter each on local government, the city of New York, and the state and the Union. Part Two, on the administrative system, deals with organization and management, finances, personnel, and forms of administrative action. Perhaps of greater interest for most sociologists are those chapters of Part Three, "The Public Services," concerning law enforcement and public safety, education, health and mental hygiene, social service and correction, and public works and housing.

The Florida, Mississippi, and Wyoming volumes are somewhat shorter than the New York study, but they are similar in scope and organization. Each is competently written by two political scientists in the respective state universities (plus, for Florida, the director of the legislative reference bureau). Any one of these studies will be used mainly by residents of the single state and no doubt will have only limited interest for others who are not specialists or researchers in some aspect of state government. None of the three states has been a conspicuously progressive innovator; and such special institutions as, for example, Florida's "cabinet" (long associated with a weak governorship) are hardly to be recommended to other states as means for improving their systems.

The authors of the Mississippi and Wyoming books, in their final "Look Ahead" chapters, review some of the most serious

shortcomings of their state-local governments and suggest paths toward simplification and modernization. Highsaw and Fortenberry speak of the "awesome burden on Mississippi's political leadership" for achieving major structural and policy changes, and of the price of failure as being the "return" of "initiative . . . to the Federal government with centralization of political and administrative power the only alternative." Trachsel and Wade emphasize the potential value for Wyoming of a "little Hoover commission," a complete revision of the constitution, a unicameral legislature, and adequate salaries (\$10,000 to \$12,000 a year) for legislators. The Florida authors reserve terminal emphasis for planning, explaining that the state planning division ceased to function in 1953 when the legislature made no appropriation for it; and they suggest that the "planning function will be re-examined in the years ahead."

Each of these volumes can serve admirably not only as a college textbook but also as an authoritative source of information and ideas for public officials, for civic organizations of many kinds, and for the growing numbers of individual citizens seriously concerned with governmental problems. It is to be hoped that the other forty-eight studies in the planned series will appear without undue delay.

FRED A. CLAIBORN.

Department of Political Science,
University of Wisconsin.

International Migrations. By Donald R. Taft and Richard Robbins. New York: The Ronald Press Company, 1955. Pp. viii + 670. \$7.00.

Since the publication of Taft's *Human Migration* nearly twenty years ago, the course of world events has brought about major changes in the field of international migration. World War II and the defeat of Nazi totalitarianism, the resurgence of nationalism in many parts of the world, and growing populations pressing upon national resources all have led to the forced as well as voluntary migration of millions of the world's people. The American experience, except for its historical interest and the lessons which can be learned from it, is no longer, even for Americans, of the greatest importance on the world scene. Reflecting these developments, the present volume is more than a revision of *Human Migration* and is "designed to meet the need for the treatment of the movements of men as processes world wide in scope and closely related to other still larger processes and problems."

The book consists of twenty-three chapters organized into four parts. Part I, "Elements in the Migration Process," is devoted to a description of the history and extent of world migration and to a discussion of the general factors influencing it—the growth of population, economic pressures, nationalism, and political rivalry. In Part II, "Processes in the International Arena," analysis of international migration from World War I to the present is made. The authors chart the change in the character of European migration brought about by the rise of totalitarianism and war, the growth and problems of Israel as a result of the "ingathering of the exiles," and migration in Asia and Africa. Part III is devoted to immigration to the United States and includes an analysis of the McCarran-Walter Act of 1952. In the final section of the book, the authors present "hypotheses" concerning the international conflict process and the relation of tensions generated by international migration to it.

This volume very well fills the need for a text for courses in international migration and provides a body of supplementary material for courses in population and minority groups. In the footnotes and in their selected references the authors supply the student with most of the pertinent bibliographical references in this extensive field.

ROBERT G. BURNIGHT.

Department of Rural Sociology,
University of Connecticut.

Needed Research in Health and Medical Care: A Bio-Social Approach. By Cecil G. Sheps and Eugene H. Taylor. Chapel Hill, N. C.: The University of North Carolina Press. Pp. ix + 216. \$5.00.

A three-day interdisciplinary seminar on "Needed Research in Health Care," held in Chapel Hill, North Carolina, September 11-13, 1952, provided the material on which this book is based. The forty-seven seminar participants represented a wide range of scientific fields, including clinical medicine, hospital and medical care administration, physiology, public health, sociology, economics, anthropology, and psychology. The two authors, who took personal responsibility for writing the book, had a major role in planning and organizing the seminar.

Work in the bio-social field is considered as a needed next step in research in health and medical care. The book, like the seminar, proceeds on the challenging task of identifying, in varying detail, areas of bio-social research that should be rigorously

studied during coming decades. The listing of subject areas for the seminar illustrates how the fields of bio-social research were visualized: social physiology, social epidemiology, social science research in health, and the administrative field. These four main areas for bio-social research were chosen with recognition of the "interests of physiologists and clinicians, epidemiologists, social scientists, and administrators" (p. 130).

The authors show insight in identifying the principal ideas discussed at the seminar. In recording the wide range of approaches both for subject-matter research and methodological undertakings in the bio-social field, the book reports the seminar discussions effectively. The informal nature of the seminar helped to identify both agreements and differences of viewpoints of the participants. The treatment of high points of such interaction is a strong contribution of the book.

In the opinion of this reviewer, one of the principal contributions of the book is the bold identification of approaches in the bio-social research field. Systematic evaluations of such approaches are not presented and are not to be expected here. This brief seminar could not yield such results because of the exploratory stage of current work in this field.

The book will be useful primarily to medical and social science research workers. It will stimulate their horizon of ideas and thereby contribute to sound and useful research in the bio-social field.

DONALD G. HAY.

Agricultural Marketing Service,
U. S. Department of Agriculture.

Current Trends in Psychology and the Behavioral Sciences. By John T. Wilson, Clellan S. Ford, B. F. Skinner, Gustav Bergmann, Frank A. Beach, and Karl Pribram. Pittsburgh, Pa.: University of Pittsburgh Press, 1954. Pp. xvi + 142. \$4.00.

With an introduction by Robert A. Patton, six lectures presented last year at the University of Pittsburgh, under the auspices of its Department of Psychology, are contained in this book. The lectures, eighth in the *Current Trends in Psychology Series*, have the announced theme of "relationships between psychology and some of the other behavioral sciences."

John T. Wilson, in his lecture: "Psychology and Behavioral Science," takes a conservative stand by indicating that, while noteworthy interdisciplinary endeavors have been made, considerable problems are

encountered, and that the frontiers of psychology are being extended by Lewin, Allport, Murray, Moreno, Sherif, Cantril, and others to include the study of social behavior. In discussing "Some Potential Contributions of Anthropology to Psychology," Clellan S. Ford states that anthropology can furnish to psychology a cross-cultural laboratory for testing hypotheses concerning human behavior, and a partnership in building a "new social psychology" with principles of world-wide application. B. F. Skinner, in "The Science of Learning and the Art of Teaching," makes a stimulating plea for advances to be made in teaching. With research as a basis, he emphasizes the desirability of using mechanical learning aids. Some philosophical principles dealing with the relations between sciences are treated in "Reduction," by Gustav Bergmann.

The provocative discussion by Frank A. Beach, "The Individual from Conception to Conceptualization," has the thesis that all development, organic through emotional, follows an orderly and predictable course of development and is best understood as the product of mutual interaction between a few classes of basic factors. Karl H. Pribram, in "Toward a Science of Neuropsychology," reports a study in which both the central nervous system and the environmental conditions of monkeys were manipulated.

Students of educational sociology will find Skinner's lecture insightful and valuable, while those interested in social-psychological and sociological considerations of "socialization" should discover Beach's presentation very helpful and unique.

JOHN R. CHRISTIANSEN.

Department of Rural Sociology,
University of Kentucky.

Introduction to Social Welfare. By Walter A. Friedlander. New York: Prentice-Hall, Inc., 1955. Pp. xvii + 683. \$6.75.

Rural sociologists will find in this book a comprehensive, easily understandable treatment of social welfare—primarily from an urban point of view. The historical treatment of social welfare in England and in the United States lays the groundwork for the balance of the text. It gives credit for the development of social welfare in the United States to the private agencies and to the settlement house movement; it recognizes the importance in social welfare legislation of such meetings as the White House conferences.

In the chapter "Methods of Social Work," attention is given to case work, group work, community organization, research, and administration, as carried on by private agencies as well as by the government. Considerable space is allotted the description of the various types of agencies. Also in this part, there is a section on rural social services which makes social welfare an inclusive function by including a description of the work of the USDA Extension Service. The treatment of how rural social-welfare programs function is sketchy and leaves much to be desired. In contrast, public assistance and social insurance are given detailed description. In a discussion of the gaps in these services, nothing is said of the weaknesses with respect to rural areas.

The author goes into considerable detail concerning methods and principles relating to family service. Considerable attention also is given to child welfare services, maternal and child-health services, foster-family care, adoption, institutional care, school social work, and child-labor protection. He points out the deficiencies in child-labor legislation relating to agricultural work, but gives only one paragraph to the problem. Likewise, the description of health services, showing the recent growth of medical social work, overlooks the needs in rural areas. An appeal is made for extending health service; the author shows how those under public assistance can now get medical care such as is denied many low-income families.

The chapters on crime, delinquency, and corrections; veterans' services; industry and social welfare; and public housing are all well done from a descriptive point of view. They sketch the developments, present trends of thinking relative to desirable services, and show how such services as probation are carried out in the present day. In each chapter, some attention is given to new legislation and what it means, such as the Housing Act of 1950. The chapter "International Social Welfare" treats such agencies as UNRRA, ECOSOC, IRO, UNICEF, ILO, WHO, FAO, and UNESCO, giving most attention to the International Refugees Organization and UNICEF. A section is also given to the technical assistance program of the United States. An important aspect of international cooperation—the voluntary agencies—are rightly given credit for increased international good will and respect.

The last part of the book, on social welfare administration, is brief but descriptive. This, like the rest of the book, tells what

and how, but it is not highly evaluative. From the point of view of method, the section on community organization is particularly good. The author concludes with interesting sections on the outlook, on the trend toward teamwork with other professions, on the international scene, and on the trend toward helping people to help themselves. Not to be overlooked is the comprehensive bibliography to be found at the end of each chapter.

DAVID E. LINDSTROM.

International Christian University,
Tokyo, Japan.
(On leave, University of Illinois.)

Social Foundations of Education. By Harold Rugg and William Withers. New York: Prentice-Hall, Inc., 1955. Pp. x + 771. \$5.40.

This textbook for "school and society" courses assumes that teachers must share an understanding of the social forces which move modern man. It argues that all social-scientific thought should be examined for its bearing on the problems of formal education, and it presumes to do this. The book has both the advantages and the limitations of a multi-disciplinary approach, no matter how creative and distinguished the authors may be. The expert in each area will find cause to quibble and quarrel.

Social Foundations of Education is in seven parts: The first and last parts contain the authors' concepts of the discipline of education and of the social role of the school. The other five parts include a survey of contemporary political-economic problems, international tensions, problems in social psychology, intellectual history, and culture theory. This ratio of five to two is a fair measure of the attention given general social science data as related to that given pedagogical thought and practice. Both the educational theory and the social science survey are written from a clear bias, which enables the authors to write with obvious zest and makes the book quite readable. The same bias will also lead to some irritation and to allegations of distortion.

In the opinion of the reviewer, this book provides the kind of data on which educators should base their educational program. Yet, many prospective teachers are inadequately grounded in the social disciplines when they approach the professional education program. To provide this social science foundation in a single course, outlined in a single text is, however, a most ambitious undertaking. Rugg and Withers have not been lacking in ambition. Their

results deserve serious consideration by those concerned with the professional preparation of teachers and will be suggestive to those who consider the "problems approach" a promising basis for interdisciplinary courses in the social studies.

MERLE L. BORROWMAN.

Department of Education,
University of Wisconsin.

Studying Your Community. By Roland L. Warren. New York: Russell Sage Foundation, 1955. Pp. xii + 385. \$3.00.

This volume is a worthy successor to the previous two practical guides to community study published by the Russell Sage Foundation—*What Social Workers Should Know About Their Own Communities*, by Margaret F. Byington (1911), and *Your Community: Its Provision for Health, Education, Safety, and Welfare*, by Joanna C. Colcord (1939). Both of these works were very popular and were reprinted and revised a number of times. This book is likely to be as successful. As a down-to-earth manual to aid responsible lay citizens in learning what and how they may find out about their local communities, it succeeds admirably. It weaves together brief introductions to subject matter and concise elementary suggestions on techniques and sources of information. Following its predecessors, it uses to good advantage the device of listing numerous questions that the citizen might seek to answer about his community.

It has much the same format as that of Colcord. Opening with a brief chapter on how to use the book, it continues Colcord's chapters dealing with education, recreation, the community setting, religion, health, services to special groups, and associations. In addition, though there is considerable modification of the arrangement and chapter organization of other areas, there is the same comprehensive coverage of government, crime and law enforcement, the economy, planning, zoning, housing, public assistance, community organization, and family and child welfare.

Nevertheless, Warren's is a new book, not a revision. It is much larger (some 120 more pages and an expanded index), and much more detail is given to some areas—for example, communications and race relations. In addition, there are three entirely new chapters. "Organizing a Community Survey" considers the general types of decisions that are involved in planning a community survey. Next, "Aids to the Survey" provides a guide to important

sources of information and techniques of securing and analyzing the data. Finally, "Some Important Aspects of the Community" calls attention to the importance of such things as rural-urban characteristics, informal associations, spatial patterning, social classes, the functions of social agencies, and social change—things not encompassed in previous chapters.

The newness and adequacy of this volume does not lie merely in the addition of these chapters and the rearrangement of material. It consists, more importantly, in the broader perspective within which Warren places the various detailed inquiries after facts. Throughout the book there is sensitivity to the interconnections of life in the community, and into this are woven numerous brief but useful summations of what sociological research reveals about different phases of community life. The result is a work that is not only a good guide to community fact-finding, but one that provides much toward an introduction to the sociology of the community.

WILLIS A. SUTTON, JR.

Department of Sociology,
University of Kentucky.

A Handbook of Plans and Programs for the Community Council. By V. A. Edwards. Tuskegee Institute, Alabama. Prepared under auspices of Tuskegee Institute and the National Council of Churches of Christ in the U.S.A., 1955. Pp. 78. No price given.

The title of this publication indicates its purpose. It is a handbook containing useful "how-to-do-it" program and planning suggestions for community councils and member organizations. The experiences of a religious extension director with rural pastors and their people in church and community programs in Alabama provided the stimulus for such a manual.

The contents "fall in three general divisions. The first is designed to state the problems. The second, which deals with the Community Council and procedures for successful meetings, sets up the machinery for social action; the third consists of materials for suggested activities from which insights to solutions may be gained."

It is significant that, in Alabama Negro communities having councils, rural pastors usually serve as the general coordinators. The leadership role of the rural pastor in secular affairs deserves more intensive study. The author keeps before the reader

the potentialities of the rural church as a motivating and integrating force for general community improvement.

An interesting and factual discussion is that of the problem of "professional absenteeism." The term means "the existence of nonresidential leaders who serve the people in rural communities." One 6-by-10-mile Alabama district, with 16 churches and 8 schools, is served by one resident school teacher and one resident pastor. The remaining teachers and preachers commute from their homes that are from 12 to 120 miles away. The author characterizes the nonresident pastors as "brief-case preachers; that is, they spend Saturday night in their church, and as soon as the services are over on Sunday, they leave the community." This professional absenteeism accounts for a lack of consecutiveness and enthusiasm for community programs.

With some major problems of the rural community stated and analyzed, a discussion of the community council as a tool for bringing together the forces of the community for effective social action follows. Here the organizational structure of the council and some recommendations for program planning and execution are presented. Extensive use is made of education and action agency materials, particularly those of the Agricultural Extension Service. The suggestions for conducting business and educational meetings are of particular interest to the reader who is often faced with such responsibilities.

In the final section, the reader may lose continuity and become somewhat concerned that the author has violated his stated premise that a community council *does not* carry on an action program of its own. The handbook does not always clearly distinguish between descriptions of programs of the community council and of the member organizations. The community functions of the church also become somewhat obscure in the final section.

This publication should have widespread general use. It makes a substantial contribution to the growing field of literature in community development. Those who deal with organizational and program-planning activities will find valuable suggestions, aids, and helps contained in one book that otherwise can be had only by searching through innumerable pamphlets, leaflets, and bulletins.

DORRIS W. RIVERS.

Division of Sociology and Rural Life,
Mississippi State College.

BOOK NOTES

Social Norms and Roles. By Ragnar Rommetveit. Minneapolis: University of Minnesota Press, 1955. Pp. xi + 167. \$2.50.

The author, who is docent in social psychology at the University of Oslo and one of a group of extraordinarily exciting investigators at the flourishing university-affiliated Institute for Social Research, has produced a work which combines the best in both the European and the American social science emphases. First of all, Rommetveit penetratingly analyzes and clarifies the concepts "frame of reference," "social norm," and "social role," and indicates what would be a rational relation among these concepts and their various usages. (This concept-analysis task, which long needed doing, is in itself no minor contribution.) Treating "social norms" in the sense of "enduring social pressures," a tentative model for their study is presented, using some of the ideas previously developed. A bit of gratuitous statement of propositions and derivations in symbolic-logical manner does not detract from the very interesting model proposed, which relates group and individual processes. The final major section of the book, building upon Rommetveit's thought and examination of studies by others in the earlier sections, reports the procedures and findings of well-executed quantitative researches on the influences (including cross-pressures from parents and peer groups) on religious attitudes and on sex roles of adolescents in two Norwegian rural districts.—BURTON R. FISHER.

Class and Society. By Kurt B. Mayer. Garden City, N. Y.: Doubleday and Company, Inc., 1955. Pp. vii + 88. \$0.95.

Mayer's little book, the tenth volume in Doubleday's Short Series, is probably the most complete elementary discussion of stratification to appear to date. Its completeness, however, resides in the theoretical scheme laid down in the first chapters. The remainder of the book presents a competent, lucid description of the American stratification system, beliefs about class, and social mobility. Little attention is paid to other societies, aside from a historical description of early Western stratification patterns and a remark or two about caste in India. Within American society, practically nothing is said concerning the functional relationships of stratification to other elements of social structure.

Since this is a short book, it could hardly

be expected that all of the complex issues in stratification theory could be covered. On the whole it is a fine piece of work, and it will be welcomed by teachers of stratification. Moreover, while rural society is scarcely mentioned, the rural sociologist will find the book useful as collateral reading for his courses, for the influence of modern stratification on rural life is certainly as profound as it is on other aspects of society.—ARCHIE O. HALLER.

Social Disorganization. (2nd edition.) By Robert E. L. Faris. New York: The Ronald Press Company, 1955. Pp. viii + 664. \$5.50.

The revised edition of this text has been rewritten and improved within the chapter outlines of the first edition. The most significant change, including the addition of new research findings, is found in the chapter on mental illness. Rearranging of materials has increased the general clarity of the text, although the new format and reduced page size may be considered somewhat less attractive and readable. This edition loses none of its usefulness for those who are primarily interested in a more-or-less consistent approach to various forms of deviant behavior rather than the eclectic approach of the traditional social problems text. Faris' orientation may not be wholly acceptable to many sociologists, but the superiority of this text over others will insure its continued adoption in introductory courses on social disorganization.—LYLE W. SHANNON.

The Field of Social Work. (3rd edition.) By Arthur E. Fink, Everett E. Wilson, and Merrill B. Conover. New York: Henry Holt and Company, 1955. Pp. ix + 630. \$5.25.

This is the third edition of Fink's *The Field of Social Work*, the first edition having appeared in 1942. The rapid changes in the area of social welfare legislation, as well as shifts in problem areas with which social workers are concerned, is ample justification for the frequent revisions. The new edition has the advantage of incorporating a discussion of the recent revisions, especially on the federal level, of welfare legislation and administration. A chapter on social services for the aged has been added in recognition of the growing concern with this problem.

The authors have retained the essential structure of the earlier editions which gives a workmanlike, if pedestrian, account of the history and current practice of the field of

social work. The substantive material is illustrated by detailed case histories.—ALFRED KADUSHIN.

La Erosion y La Conservacion del Suelo en España. By the Instituto de Estudios Agro-Sociales, Ministerio de Agricultura; Madrid, Spain. 1955. Pp. 80. No price given.

Soil erosion in Spain is the subject of this short volume. The purpose of the writing is to create an awareness of the need for an integrated program of soil conservation in that country. Spain has been victimized by both wind and water erosion, and so far there has been no preventive program instituted. In this booklet, the Institute appeals for such a program of conservation.

The causes of erosion are reviewed and the particular effects experienced in Spain are depicted. Loss of soil productivity, sedimentation of water projects, and flood damage are among the results of deforestation and unjudicious utilization of the land. The "individualistic mentality of the Spanish farmer" is cited as a causal factor and a possible obstacle to conservation. The Institute asks for legislation regulating land use as a means to preserving and rebuilding Spain's agricultural soils and deterring the secondary effects of erosion. It solicits support for its proposals by appealing to the public's interest in the national welfare.

Photographs in abundance illustrate the text. The volume, which is informative as to the cause, effects, and prevention of erosion, tends to concentrate on rates of soil loss, but gives no real picture of the total extent of erosion in Spain.—W. Roy Cook.

BOOKS RECEIVED

Administrative Practice of Social Insurance. Geneva: International Labour Office, 1955. Pp. 86. \$1.00.

American Agriculture: Its Structure and Place in the Economy. By Ronald L. Mighell. New York, 16: John Wiley & Sons, Inc., 1955. Pp. xii + 187. \$5.00.

American Society: An Introductory Analysis. By Luke Ebersole. New York: McGraw-Hill Book Company, Inc., 1955. Pp. x + 510. \$5.50.

Analytical Sociology: Social Situations and Social Problems. By Lowell J. Carr. New York: Harper & Bros., 1955. Pp. xii + 795. \$6.00.

Cells and Societies. By J. T. Bonner. Princeton, N. J.: Princeton University Press, 1955. Pp. 234. \$4.50.

Commercial Mushroom Growing. By M. H. Pinkerton. London: Ernest Benn, Ltd., 1954. Pp. 223. \$4.50.

The Crime Problem (2nd ed.). By Walter Reckless. New York: Appleton-Century-Crofts, Inc., 1955. Pp. x + 728. \$6.50.

Culture and Mental Disorders. By Joseph W. Eaton and Robert J. Weil. Glencoe, Ill.: The Free Press, 1955. Pp. 254. \$4.00.

Delinquent Boys: The Culture of the Gang. By Albert K. Cohen. Glencoe, Ill.: The Free Press, 1955. Pp. 202. \$3.50.

Family Socialization and Interaction Process. By Talcott Parsons and Robert F. Bales. Glencoe, Ill.: The Free Press, 1955. Pp. xvii + 422. \$6.00.

Making the Most of Marriage. By Paul H. Landis. New York: Appleton-Century-Crofts, Inc., 1955. Pp. xii + 542. \$5.50.

Rural Versus Urban Political Power. By Gordon E. Baker. (Doubleday Short Studies in Political Science, No. 20.) Garden City, N. Y.: Doubleday and Company, Inc., 1955. Pp. viii + 70. \$0.95.

Satellite Generals: A Study of Military Elites in the Soviet Sphere. By Ithiel de Sola Pool. (Hoover Institute Studies.) Stanford, Calif.: Stanford University Press, 1955. Pp. vi + 165. No price given.

Social Problems. By T. Lynn Smith and Associates. New York: Thomas Y. Crowell Co., 1955. Pp. x + 517. \$4.75.

Social Problems in America. (Revised.) By Elizabeth Briant Lee and Alfred McClung Lee. New York: Henry Holt & Co., 1955. Pp. xii + 483. \$3.75.

Sociology: A Synopsis of Principles (3rd ed.). By John F. Cuber. New York: Appleton-Century-Crofts, Inc., 1955. Pp. xx + 652. \$5.50.

The Sociology of Play, Recreation and Leisure Time. By Florence Greenhoe Robbins. Dubuque, Iowa: Wm. C. Brown Company, 1955. Pp. vii + 389. \$5.75.

Uses of Agricultural Surpluses to Finance Economic Development in Underdeveloped Countries: A Pilot Study in India. (Commodity Policy Studies No. 6.)

Rome, Italy: Food and Agriculture Organization of the United Nations, 1955. Pp. v + 65. No price given.

Village India: Studies in the Little Community. Edited by McKim Marriott. Chicago: The University of Chicago Press, 1955. Pp. xix + 269. \$4.50.

Der Weidegang im Volksaberglauben der Finnen. Part IV: *Das Zurückführen des Viehes im Herbst in dem Viehstall.* By A. V. Rantasalo. Helsinki: Suomalainen Tiedekatemia Academia Scientiarum Fennica, 1955. Pp. 77. Marks 100.

Workbook in Introductory Sociology. By John H. Burma and W. Marshon de Poister. New York: Prentice-Hill, Inc., 1955. Pp. vii + 196. \$2.36.

Your Marriage. By Norman E. Himes. Revised and enlarged by Donald L. Taylor. New York: Rinehart and Company, Inc., 1955. Pp. xiv + 384. \$4.00.

BOOK REVIEWS PREPARED FOR THE DECEMBER ISSUE

Education and Social Change in Tropical Areas. By Margaret Read. London: Thomas Nelson & Sons, Ltd., 1953. Pp. ix + 130. \$1.20.

The treatment in this book is much wider than the title suggests. For the sociologist, the book's significance is that few, if any, persons with the scientific training of Margaret Read have dedicated their energies and talents to the analysis and exposition of the contributions which anthropology and sociology can make to a vitally important and practical field of human behavior. Except for chapter 1, each of the nine chapters of this small book is, so to speak, a working paper. Over a period of ten years, these papers have been read before work or study groups, or published in journals of professional workers. Each paper was originally presented with a sharp focus on a job at hand. The common denominator—which is probably best stated in the Introduction—is a concern with "the impact of new ideas, new ways of living, new methods of working, on people who have existed for many centuries in a traditional culture." Each chapter—and the book as a whole—is an outstanding and very greatly needed contribution to all those persons from so-called "highly developed" countries who are attempting to assist the people and leaders of "less developed" countries.

In a number of the papers the author was attempting to make very concrete contributions to administrators of colonial action programs; "the relation of local schools to local native administrations," programs of "Mass Education" (later called programs of "Community Development"), and training personnel are some problems treated. In other chapters, she was dealing with problems confronting technical specialists working with "underdeveloped" peoples: health and disease, nutrition, increasing production, and, most of all, education—the introduction of schools, educational methods, and content. She makes clear that education is a "process of change." In chapter 8, she reviews the experience of the British Colonial Office and makes generalizations that all persons planning and operating programs of technical assistance to "underdeveloped" countries could well afford to study most carefully.

In only one chapter does the author deal forthrightly with the topic which, in academic terms, might be the title of the book, "Anthropology and Education." In this chapter (a paper read before the Royal Anthropological Society), she presents the findings of some outstanding anthropological studies which have made contributions to the understanding of "Primitive Education," an understanding educators need to have. For example, they need to understand that the "local cultural process" of socialization is, in fact, a true process of education. There is none of the typical preachment of anthropologists and sociologists about how much their talents are needed and should be used by educators and administrators. The contribution instead is one toward understanding cultures which can and should be changed, but changed by effective educational processes.

One contribution that anthropologists have attempted to make to programs of assistance to "underdeveloped" peoples is to emphasize the disruptive concomitants of induced change. The author deals with this at many points, never in a negative way, but rather in terms of the necessity for exhorting ideas and practices and the equal necessity of "a belief in [this reviewer would say, a knowledge of] the common sense of the common man, and his native ability to use whatever help is offered when he sees the reason for a new course of action."

The author makes outstanding contributions to an understanding of programs and processes of "Community Development." She defines community development as a "general attempt to raise the level of liv-

ing in underdeveloped and backward areas, carried out as far as possible by the people themselves on a self-help principle with the advice of experts." She recites some of the many experiments in this field. A timely statement is: "It looks as if the time were nearly, if not quite, ripe for some search for a common ground in all these experiments." Her whole book is a major contribution in this direction.

CARL C. TAYLOR.

The Ford Foundation,
New Delhi, India.

Land Reforms in India. (Second edition.)

By H. D. Malaviya. New Delhi, India:
The Economic and Political Research
Department, All India Congress, 1955.
Pp. viii + 461. Rupees 3.

This book may be looked upon as an official statement of the history of land reform in India and of the present government's policy toward land reform, since its author is the secretary of the Economic and Political Research Department of the All India Congress Committee, and since the Foreword of the book is written by S. N. Agarwal, General Secretary of the Indian National Congress.

The sorry plight of the Indian peasant during the long years of British rule in India, according to Malaviya, was due to the British industrial and economic policy that "led to increasing pressure on land," and that brought disaster to the peasant of India. Support of the big landlords—*Taluqdars* and big *zamindars*—who called themselves the "natural leaders of the people" but who, in reality, were the tools of the British, reduced the peasants to "a state of complete intellectual incompetence."

If the land reforms in India are what Agarwal says they are—a symbol of socio-economic revolution through peaceful, democratic, and nonviolent means—then this revolution is of great significance to all peace-loving people. By abolishing feudal intermediaries and giving security of tenure and economic stability to the peasants, the Indian National Congress has erected the most effective bulwark possible against the coming in of any form of totalitarianism, including communism. This will be true if the peasants are given legal and secure ownership of the land they till, and if they have land enough that they will not be pressed into miserable poverty by slaving on pieces of land too small to provide at least for the minimum needs of the family on the land.

Until India was given her independence,

the fight for independence and the fight for a radical change in the land tenure and revenue systems came more and more to be closely associated. Soon after the attainment of freedom in India, the Congress Economic Programme Committee established the basic principles on which the land reform was to be launched, and for which the Congress had been working for so many years. These included the elimination of intermediaries, the fixing of a maximum size of holding, and the encouragement of cooperatives—including land cooperatives. It set up the Congress Agrarian Reforms Committee and gave it a broad mandate relative to land reform. The report of this committee is regarded as one of India's historic documents; for it has influenced the land reform movements in all state governments in India.

The All India Congress Committee, formed soon after the elections in 1952, urged the complete abolition of the *zamindari*, *jagirdari*, and similar systems of land tenure, stating that, "The growth of productive industry must proceed side by side with this agrarian change and the realization of the objective of full employment." By the end of 1952 or early in 1953, the Congress governments in most of the states had either abolished the system of intermediaries or were busy with the task. Chapters four through twenty-eight of the book describe the progress made in the various states, showing that there were differences in the way in which the program was being carried out, as well as showing the conditions before the reforms took place. There is apprehension as to the load of debt that the new owners will have to bear and the burden on the state treasuries; so a method of scaling down compensation to the intermediaries is being considered. But to do so will require changing the constitution, for no one can be deprived of his property without just compensation.

The fixing of ceilings on holdings is another problem; this has been ignored in most states. To fix such ceilings might mean the breaking up of large, efficiently managed units, and this might cut down the food supply; but the large holdings are few in number compared with the many small, inefficient units. Therefore, measures to encourage good farm management practices and to consolidate small holdings must accompany those to place ownership in the hands of the cultivators. Otherwise, there may be a serious drop in production.

Tenancy reforms have gone along with land reforms in India. Whereas the basic

policy is to establish ownership by cultivators, in some states tenancy is condoned. Tenancy reforms include scaling down rents, assuring security of the tenant, and providing options to purchase holdings. Tenancy thus becomes an intermediary form of land operation—a stepping stone to ownership.

This book on land reforms in India should be of consuming interest to those interested in a policy to establish ownership of land in fee simple by the cultivator. It is significant that in India, where the British pattern of permanent tenancy might have been followed, the people developed a different policy. India will not go communist so long as her leaders protect the right of the cultivators to own the land they work.

DAVID E. LINDSTROM.

Department of Agricultural Economics,
University of Illinois.

Culture and Human Fertility: A Study of the Relation of Cultural Conditions to Fertility in Non-Industrial and Transitional Societies. By Frank Lorimer, with special contributions by Meyer Fortes, K. A. Busia, Audrey I. Richards, Priscilla Reining, and Giorgio Mortara. Paris: UNESCO, 1954. Pp. 510. \$4.50.

Our knowledge of fertility behavior has been largely confined to the Western world where the postponement of marriage and the limitation of family size have been decisive factors. We know very little about the factors affecting fertility in nonindustrialized areas of the world; we know, however, that the factors responsible for the level of fertility in the Western world have been of almost no consequence elsewhere. Furthermore, only recently has there been an interest in how the family and other units of the social structure influence fertility behavior.

We should, therefore, welcome Lorimer's book, the purpose of which is an "examination of cultural conditions affecting fertility in different nonindustrial societies in context of their social organization and cultural values, especially with respect to the organization of the family and kinship relations and, at a later stage, with respect to degrees of social mobility." However, the book is poorly organized, and one must wander laboriously seeking the central ideas. The reader would do well to read first the summarizing remarks found on pages 198-203 and 247-251. Nowhere in the book did the reviewer find much bearing upon that portion of the author's pur-

pose indicated by "with respect to degrees of social mobility."

In his first chapter, Lorimer is concerned with the extent to which cultural conditions explain the fertility level in a given culture. Here he shows that completed fertility varies, even among stable populations where there are no recognized social conditions tending to lower fertility. Cultural factors, he concludes, are only a partial (if very important) explanation of differences in fertility levels; some variation is due to variations in genetic factors and health levels.

In his second chapter, entitled "Relation of Kinship Systems to Fertility," Lorimer draws heavily upon the work of "functional" anthropologists in tribal African societies, some of whom are listed as collaborators of the book and some of whose studies are reported upon in the appendices (and much in need of editing, one might add). From his evidence, he hypothesizes that "corporate unilateral kinship groups and related emphasis on mother or father rights in social organization tend to generate strong motivation for high fertility." Interest in fertility in such societies is in large measure an expression of the internally collective, externally competitive, ethnocentrism of such kinship groups—a thesis extended in the third chapter, "Environment, Culture, and Fertility."

The author considers certain marginal societies where the fragmentary evidence suggests that corporate kinship groups are lacking, and that the limitation of resources may lead to practices restricting procreation. However, he points out that some societies living under similar conditions are quite indifferent to fertility. Thus, we may expect to find high levels of fertility in societies where cultural conditions are merely permissive to natural procreative tendencies. In chapter IV, "Culturally Uncontrolled Trends in Fertility," the major thesis is that in such cases natural increase may be largely determined by biological factors, with only a slight modification of reproductive behavior in the interest of orderly social relations.

Some of the most interesting reading of the book deals with societies which have undergone "cultural shock," where Lorimer develops a kind of life history of the fertility behavior of the population under such conditions. Different phases are reflected in the picture of Africa today, which presents contrasting trends of (1) declines in fertility resulting from acute social disorganization and/or disease, and (2) constant levels or inclines resulting

from the dominance of biological forces released by permissive attitudes and cultural indifference to fertility along with accommodation to foreign economic and political control.

The explanation for the relationship between "Cultural Conditions and Fertility in Stable Agrarian Civilizations," chapter V, seems less clear. Lorimer believes that the motivations for childbearing may be less compulsive in agrarian societies than in primitive societies with large corporate kinship systems. But, his point that the cultural motives for fertility operating in agrarian societies may have been derived from principles formulated in a previous tribal organization context must remain in the realm of conjecture.

The important consideration of this chapter and that of the final one ("The Relations of Cultural Conditions to Demographic Transition") has to do with the differences in the levels of fertility in preindustrial Western Europe and in stable agrarian societies today, and with the differences in the social structures supporting fertility behavior in both societies. The evidence available shows that the level of fertility of agrarian Western Europe was well below that found in Asian agrarian societies today. Other evidence also shows that, contrary to what has often been supposed, the increased control of fertility is not necessarily dependent on industrialization. As an explanation of the difference, Lorimer points out that preindustrial Western Europe placed less emphasis on corporate groups and allowed the nuclear family independence with respect to marriage and reproduction.

In contrast with Western Europe, the fertility level in Asia has always been incongruous with ecological conditions. However, any concern with the limitation of family size in the present stable agrarian societies is likely to meet with serious opposition, since it would involve major changes in the institutional structure and in its derivative attitudes and values.

The reviewer has reservations as to the value of this book as a pioneer effort on the subject. Description of this type suggests numerous lines of inquiry for further exploration, with a reconsideration of the theory that corporate structures with unilineal descent tend toward high fertility levels, a theory which does not seem to have clarified the present fertility behavior in stable agrarian societies as intended by Lorimer. It would seem to this reviewer that we are not so much in need of cosmic theories about fertility behavior as we are

in need of a systematic delimiting of the problem for comparative research. Would not a more economical and feasible approach for such study be that recently advanced by Davis and Blake? First, attention would be focused on the investigation of the intermediate variables (factors directly affecting intercourse, conception, gestation, and parturition) through which social and cultural factors influencing the level of fertility must operate. Thereafter, with some discriminative evidence, an attempt can then be made to show how the social structure and its derivative culture acts through these variables to enhance and depress fertility.

MARGARET BRIGHT ROWAN.

Bureau of Applied Social Research,
Columbia University.

Report No. 1, *The Scope and Character of the Investigation*, and Report No. 2, *Mechanization and Farm Costs*. By The Royal Commission on Agriculture and Rural Life. Regina: Lawrence Amon, Queen's Printer, 1955. Pp. xiii + 122 (1); pp. xv + 175 (2). \$1.00 each.

On March 7, 1952, the Saskatchewan Legislative Assembly passed a resolution appointing a Royal Commission to investigate and make recommendations regarding the requirements for the maintenance of a sound farm economy and the improvement of social conditions and amenities in rural Saskatchewan. The resolution provided that the commission, in its inquiry and recommendations, give particular study to: (1) the problems involved in present-day trends in agricultural production, land use, and farm costs; (2) the need for farm capital and credit; (3) the further adaptation of social services and educational facilities to meet changing rural conditions; and (4) the further development of rural transportation, communication, and community services.

The commission's purpose in making its studies is to assemble practical and scientific knowledge and to provide a guide for policies and programs of rural improvement. Report No. 1 tells how the commission went about its task and how it proceeded to apply the fundamental principles of rural improvement. The report is very well done; rural sociologists interested in rural improvement as well as the techniques of making such investigations and reports will find the report helpful—especially chapter III, "The Principles of

Rural Improvement," and chapter IV, "Organization and Flow of Investigation."

The second report is an excellent analysis of the effects of mechanization on the changing character of rural life, with particular emphasis on the consequences for Saskatchewan. Chapters V, VI, and VII cover the economic and social effects and future characteristics of farm mechanization. These are especially well done.

The report emphasizes that mechanization has increased the size of farms and increased farm costs and vulnerability of a large number of farms. The larger farm units are in the best financial shape and are better able to withstand adversities, such as yield and price declines, than they have ever been in the history of the province. The commission finds, however, that from one-fourth to one-half of Saskatchewan's 112,000 farms are probably more vulnerable than ever before to price changes and to economic vicissitudes. Because of the decreasing margin between returns and costs, they have not found it possible to build up reserves comparable with their neighbors on the larger farms. The pressure on these small farmers to mechanize is tremendous, yet they cannot secure the additional land required to justify mechanization economically. Many are over-mechanized on their present acreage, but cannot get additional land because they cannot compete with larger farm operators for land that may be available for purchase.

The commission finds a real need for short-term credit to take the place of the present retail credit system which unjustly penalizes the cash customer. The machinery-repair situation in Saskatchewan is serious, according to the commission. Many dealers do not stock adequate repairs, principally because an adequate stock represents too costly an inventory for the small dealer. The composition of the manufacturing industry contributes to the problem, because with five or six major producers of farming equipment competing for available demand, much duplication of machines results, causing a tremendous number of individual repair parts that must be available for proper service of the machines. The commission feels that the solution to this problem can result only from further centralization of repair services. Farmer cooperative repair depots, although they present many problems, the commission feels, would seem to offer a practical approach to reducing the cost of repairs.

In terms of social effects from mechanization,

the depopulation of many areas by as much as 30 per cent has increased the per-capita cost of public services such as hospitals, roads, telephones, and electrification. These increased costs should be set off against the increased incomes resulting from larger farms through mechanization.

The commission states that "it is apparent that (1) machinery costs are now looming large as a factor influencing the security and stability of agriculture, and (2) there is evidence of extensive public concern over what are considered to be excessive prices of machinery." While recognizing the important contribution made by the manufacturing industry and machine distributors in facilitating farm mechanization, the commission feels that the time has come when the welfare of both the farmer and the manufacturer may well be threatened unless the manufacturing industry adopts a forthright policy "of reducing costs due to duplication in the manufacturing and servicing."

The commission recommends that farm organizations and the cooperative movement intensify their efforts in persuading farmers to recognize the opportunity available to them through increased patronage of their own organization. The commission also recommends that, should any further studies be considered in the future, specific attention be given to a thorough analysis of the economies to be realized through one or more of the following alternatives: (1) reform within the farm-equipment industry and distributing system as it now exists; (2) cooperative manufacturing and distribution; (3) nationalization of the industry.

ROLAND R. RENNE.

Montana State College,
Bozeman, Mont.

Culture and Mental Disorder. By Joseph W. Eaton in collaboration with Robert J. Weil. Glencoe, Illinois: The Free Press, 1955. Pp. 254. \$4.00.

This book—by a well-known American sociologist, in collaboration with a Canadian psychiatrist—provides another forward step in a rapidly growing area of sociological interest. It deals with the broad hypothesis that so-called mental disorders are a function of social and cultural variables. Data are derived from an interesting field survey of the Hutterite communities in the United States and in Canada. The survey was undertaken to test the assumption that a secure, stable, and highly integrated social system protects humans against emotional disorders and provides

for the continuing health of their personalities.

The Hutterites are an extraordinary ethnic and religious people. They live in 93 small and relatively self-sufficient farm colonies in Montana, the Dakotas, and two adjacent Canadian provinces. They believe in and practice the communal ownership and control of property. Their non-competitive and stable social system provides each member with economic security from birth to death. Their religion provides a body of central beliefs and approved practices into which each generation is indoctrinated and from which no major deviations are tolerated.

These people were selected for study because of their outstanding reputation for mental health. A number of professional people had credited them with a remarkable freedom from neurotic disabilities, psychotic breakdowns, and psychosomatic symptoms, and from such social difficulties as crime, delinquency, alcoholism, prostitution, and divorce. Beginning in the summer of 1950, Eaton and his co-workers conducted a census-type survey to determine whether these Hutterite groups had in fact established themselves in mental health utopias—despite surroundings where emotional disorders constitute a number-one health problem—and to appraise the social and cultural factors involved.

With a research grant from the National Institute of Mental Health, these social scientists went out in pursuit of their objectives. The efforts exerted in this pursuit were prodigious. Screening methods were applied to the entire Hutterite population of 8,542 individuals living in nearly 100 communities, in five states and provinces. Intensive screening was done in 19 colonies. Close contacts were made with Hutterite members and with physicians, hospitals, public officials, and others in positions to report on their mental health status. Briefer visits were made to 65 other colonies for screening purposes. The remaining 9 colonies were surveyed through information from purely secondary sources.

Case finding and classification was effected mainly through the clinical judgment of the psychiatric member of the research team. Case counts were converted to life-long morbidity rates of mental disorder. By use of a standard expectancy method, Hutterian rates were compared with those derived from eight other census-type surveys made in European and American communities during the past quarter century and with a recent Formosan study. This screening procedure led to the identifica-

tion of 199 active, improved, or recovered cases among the Hutterites.

Included were psychoses, neuroses, "personality disorders," mental deficiency and epilepsy. These diagnostic categories contained 1 in 43 Hutterites living in 1951. This indicated that these farm groups did not have quite the high levels of mental health for which they were reputed. By comparison, however, these people appear to be remarkably free from emotional disorder. According to Eaton-Weil findings, there were only 53 detectable instances of psychotic disorders in the life histories of all living Hutterites. This corresponds to an expectancy rate of only 6.2 per 1,000 population, or 1 psychosis for each 163 persons. The rate for neuroses was somewhat higher, 1 in 123.

The authors' cross-cultural comparisons give the Hutterites a higher enumerated rate of psychoses than 7 of the 10 populations compared. However, serious doubts may be raised with respect to the comparability of the rates derived from the several studies. The Hutterian lifetime rate of 1 in 163 for psychoses (mostly manic-depressive reactions) stands in striking contrast to findings for the general population. By reliable estimates of competent statisticians, 1 in every 15 persons in New York State who lives to age 65 may expect to spend some time as a patient in a mental hospital. It is estimated that 1 in every 10 Americans is likely to suffer a serious emotional difficulty that will incapacitate him during some part of his life. By contrast, the Hutterites do indeed seem remarkably free from serious mental disorders.

While this book makes a valuable contribution to sociological literature, it has a number of limitations, as the authors themselves point out. The study is primarily epidemiological, descriptive, and normative. As such, it is very useful for exploratory and hypothesis-forming purposes. Studies of etiology remain an unfinished business for the researcher in this field. This requires rigid experimental design to test vital hypotheses pertaining to social factors in mental illness.

The present study indicates that emotional disorders occur with varying frequencies among peoples regardless of the cultural framework or social system in which they live. This may suggest genetic factors as primary in the etiology of mental illness. More important for the social scientist, it suggests that the major causal factors may be found in profound and prolonged disturbances in interpersonal rela-

tions. Such disturbances may occur within any cultural framework regardless of the type of social system and regardless of genetic constitution. This general hypothesis provides a promising research lead.

A. R. MANGUS.

Department of Sociology and Anthropology
and
Department of Agricultural Economics and
Rural Sociology,
The Ohio State University.

Midwest and Its Children: The Psychological Ecology of an American Town. By Roger C. Barker and Herbert F. Wright. Evanston, Ill.: Row, Peterson and Company, 1955. Pp. vii + 532. \$7.50.

Authors and publishers strive hard to reveal the contents of their books in the title without losing "appeal." Such is the case with this volume, the report of a seven-year research study dealing with the situational influences upon children. *Midwest* is the pseudonym for a town of 707 people in Kansas. Its 119 children under 12 years of age are the main subject of study, with seven additional children in a privately endowed institution for crippled children providing comparative data. As a study in "psychological ecology," it is concerned with the "psychological habitats of Midwest children and with the structure, dynamics, and content of their behavior in these habitats." The intent is to relate the content of child behavior to the *behavioral setting*, with its spatial, temporal, social, and psychological dimensions. The theoretical framework for the study draws heavily from the Lewin behavioral field approach.

The authors (psychologists) frankly admit their entry into the territory of sociologists and anthropologists without consulting them. While this "calculated professional chauvinism" made for lengthy procedures when shorter and more adequate ones might have been applied, their fresh approach to the classification of social situations (behavioral settings) is perhaps better unfettered by traditional notions and concepts.

A main contribution of the book, in the reviewer's opinion, lies in the explicitness of the methodological techniques used in recording and classifying the *behavioral settings*, *action patterns*, and *behavioral episodes* for the children of the midwestern town studied. About a third of the book is given to a mapping of the behavioral settings of Midwest. The task is that of inventorying and classifying the settings in

ways which are meaningful for child behavior. The 585 specific settings are listed under such diverse headings as: "School classes," "Barbers and beauticians," and "Rest rooms." A more functional classification is provided by the thirteen *action patterns*: aesthetics, business, earning a living, education, government, nutrition, orientation, personal appearance, philanthropy, physical health, recreation, religion, and social contact. Time spent in the settings, "penetration" into the settings, and dominant behavior mechanism (affective behavior, gross motor activity, listening, looking, manipulation, talking, thinking) were arrived at for all settings of the town during a period of one year. While the time and cost are forbidding, a method is presented for enumerating and classifying the variety of social settings of a town or community.

The latter part of the book deals with the description of the method and findings of the *specimen records* of eleven children covering a day for each. At first glance this seems a minute segment of child behavior in a town over a one-year period. But, when it is explained that the episode is the unit of study rather than the individual, the selection is at least understandable. The behavior of a child during a day contains 600 to 1,300 episodes, identified by such everyday terms as "getting dressed," "pushing over box," "responding to mother's banter," and "noting observer." These episodes are identified from the continuous specimen records of the eleven children and contain a complete account of the behavior of the children in their settings from "awakening" to "going to sleep."

Life in this small town gave children positions of power and prestige early in their lives, contrary to what is assumed to be the case in the city. Also, "Growing up in Midwest had advantages in the way of greater freedom, status and privileges, and these were achieved with infrequent matriculative traumas" (p. 460).

This should give the "small community" proponents new hope. But let's read on. "Children were, however, subordinate to adults or aged persons in all community settings" (p. 461). "The levels of accomplishment of Midwest children were usually lower than those of which they were capable" (p. 460). This is explained as due to the wide variety of settings in which the people—adults as well as children—of Midwest were "under pressure" to participate.

All in all, the impression is given that the children of this midwestern town did not fare badly. One wonders, however,

whether this impression is not somewhat misleading when account is taken of the fact that many will leave the town for the more competitive and less protected settings of urban life.

Despite its somewhat technical style, this book should be of interest to rural sociologists. It demonstrates a way of classifying situations instead of people, a method which might properly be used to test some of the notions which people hold about the difference between life in the city, in the village, and on the farm. It also describes the gigantic research task which lies ahead for those ambitious enough to attempt this type of study. Hence, while the book is not easy reading, is occasionally redundant, and could be much improved in organization, it is recommended for those interested in method as well as in the content of behavior in its real-life context.

EUGENE A. WILKENING.

Department of Rural Sociology,
University of Wisconsin.

The Language of Social Research: A Reader in the Methodology of Social Research. Edited by Paul F. Lazarsfeld and Morris Rosenberg. Glencoe, Illinois: The Free Press, 1955. Pp. xiii + 590. \$6.75.

This book consists of 64 research articles organized around the following major topics: "Concepts and Indices," "Multivariate Analysis," "The Analysis of Change Through Time," "Formal Aspects of Research on Human Groups," "The Empirical Analysis of Action," and "Toward a Philosophy of the Social Sciences." In addition, there are introductions to each of the sections, by the editors. All but ten of the articles are reprinted from previously published journal articles or books and are well known to social science researchers and teachers. The authors are, for the most part, outstanding social scientists, mainly sociologists and social psychologists; but psychology, economics, anthropology, and political science are also represented.

In this reviewer's opinion, the selections designed to illustrate the points made by the editors in their excellent introductions to the various sections of the book do not live up to the promises made for them. This is particularly true for the articles selected to illustrate multivariate analysis; the materials presented employ only the simplest techniques. The final section, "Toward a Philosophy of Social Science," although it contains some good pieces, does not get very far along the promised road.

Because the volume is concerned mainly with the analysis of data rather than with the collection of data, its usefulness as a text in research methods is considerably impaired. Despite this and other limitations, it should prove to be a useful aid in many courses in research methods in a variety of social science fields. It is to be hoped that the editors, at some time in the future, will expand and fully develop the ideas contained in their introductions into a full-length book. In this reviewer's opinion, this would serve a much greater need than the present volume of readings and might well be a major contribution to research methodology in the social sciences.

WILLIAM H. SEWELL.

Department of Rural Sociology,
University of Wisconsin.

Rural Sociology. (Second edition.) By Lowry Nelson. New York: The American Book Company, 1955. Pp. xvi + 568. \$5.75.

Rural sociologists and others will be pleased with the second edition of this text by Lowry Nelson. The revision has been rather thorough; the contents have been brought up to date with 1950 census data and other facts. Teachers who have thought the first edition to be organized soundly, from a conceptual point of view, will be pleased to know that the same basic framework is maintained. Since this framework is in accordance with generally accepted sociological concepts, it is the reviewer's opinion that the need for a complete reorganization is not urgent. Others who may have hoped for expansion or modification of the conceptual framework will be disappointed. The only significant conceptual changes have occurred in the chapter on social stratification.

Revisions have been made largely by bringing statistical and other facts up to date. Also a number of charts have been changed into more meaningful form, and some completely new charts have been added. Likewise, some references from the old edition have been dropped while a larger number have been added. These references include much of the more vital material in rural sociology that has been published recently. Such references, presented as they are within the organized scheme of the text, should be of great help to the student and teacher alike.

As did the old edition, this book contains a rather extensive list of possible reports and term papers. There is also a bibliography arranged by type of reference and by cultural areas of the world.

Nelson conceives the subject matter of rural sociology as groups and institutions in rural society. About three-fourths of the chapters are devoted specifically to these subjects. The other chapters lay the basis for this treatment, with reference to general concepts, demographic data, and some general agricultural information of pertinence to the subject.

As a means of making clear the primary role of the rural sociologist—that of obtaining understanding—Nelson purposively omits applied aspects of rural sociology. It would seem to be a challenge, however, for the rural sociologist to achieve this clarification of his role and at the same time introduce, upon the basis of the understanding he does have, some suggestive ideas, techniques, and principles of applied sociology.

Nevertheless, few rural sociologists will question the extent to which Nelson has achieved his goal, in this and the earlier edition, of making a basic contribution toward a fundamental understanding of rural people, groups, interaction, and institutions.

ThEREL R. BLACK.

Department of Sociology,
Utah State College.

Rural Versus Urban Political Power. By Gordon E. Baker. Garden City, New York: Doubleday & Company, Inc., 1955. Pp. viii + 70. \$0.95.

This short study is concerned with the wide gap between the theory of democratic representation and the fact of entrenched inequality of legislative representation in most states and, in lesser degree, in Congress. Factors contributing to the establishment and maintenance of rural overrepresentation are reviewed briefly, and the extent and consequences of unbalanced representation are examined with admirable discrimination and insight. That the country-city political cleavage is not a simple phenomenon is recognized: "Certain conservative city forces actually fear equitable political strength for their own localities on the ground that the status quo is more safely insured under the formal control of 'less radical' country legislators."

In many states, constitutional provisions effectively limit urban representation; the failure to reapportion properly is another underlying cause of imbalance. Representation by area, regardless of population, is a favorite constitutional device for weighting rural votes; and urban strength may be reduced by allowing progressively less representation to more populous cities, by prohibiting the division of counties into

districts, by setting maximum limits of representation for larger counties and cities, and by various other constitutional provisions. If these devices give insufficient protection, the rural-controlled legislature may simply fail to reapportion or redistrict in accordance with changing population patterns. Indiana's present apportionment was made in 1921, Minnesota's in 1913, and Tennessee's in 1900. Malapportionment by ordinary gerrymander may also be practiced.

Baker analyzes the effects of such inequality on the two-party system and intra-party structure, on the status of the county, and on social and economic policies. He is concerned also with its impact on city government, with the weakening of public confidence in state legislatures, and with the consequences for the general effectiveness of state governments.

A chapter on Congressional representation not only reviews the highlights of our national arithmetic of democracy but also emphasizes the strategic advantages enjoyed by rural district representatives in the power structure of each house.

The author believes that inflated rural power is one of the basic contributing causes for much of the stalemate that has become so characteristic of our political life. The people and their problems are becoming more heavily urban. The President and the governors tend to represent the whole of their constituencies. But the state and national legislatures reflect an unduly strong influence of rural and small-town constituencies, and the result is "a check and balance system with a vengeance." The author asks the obvious question "whether the ever-accelerating problems of an urban, industrial society can be adequately met by political machinery whose design seems more suited to an earlier, simpler, and far different era."

The prospect for readjustment of representative institutions is not encouraging. All but six states give the legislature itself virtually full responsibility for reapportionment; and in recent years only a very few legislatures (including, notably, Wisconsin's) have adopted equitable redistricting measures. The reluctance of the courts to interfere in this "political" question, the difficulty of amending state constitutions to provide for some variety of "automatic" reapportionment, and the cumbersomeness and expense of using the initiative process (where it is available) are aspects of the situation which do not encourage optimism. If the continued frustration of some important urban interests leads to more severe

crises, however, basic changes are likely to occur despite all obstacles. Proponents of change have available the still-powerful appeal to the professed ideals of political equality and majority rule. The author rightly believes that the ethical problem indicated by the variance between democratic theory and undemocratic practices in legislative representation is a basic challenge to contemporary American institutions and values.

FRED A. CLARENBACH.

Department of Political Science,
University of Wisconsin.

American Agriculture, Its Structure and Place in the Economy. By Roland L. Mighell. New York: John Wiley and Sons, Inc., 1955. Pp. xii + 187. \$5.00.

This is the first volume in the long-awaited new Census Monograph Series, sponsored by the Social Science Research Council. A circular announces that the series will consist of a group of monographs covering an extensive range of topics of interest to economists, agricultural experts, statisticians, sociologists, political scientists, and others. The idea of the series began to take form when plans were drawn for the 1950 census. The need was felt for extensive analysis of the data to be gathered, and, late in the 1940's, the Social Science Research Council, with the assistance of the Russell Sage Foundation, took the lead in stimulating the formulation of suitable plans for the achievement of this objective. The thought is that, as each new monograph appears, the value of the series will increase, and that, "with the publication of the final volume, a more integrated picture of the nation's economy at mid-century is expected to emerge."

The author states in the preface of this first number that he had the help of an advisory committee on "The Structure of American Agriculture," under the chairmanship of Sherman E. Johnson, "in developing the initial plan for the report and throughout the analysis." The analysis is based mainly on the 1950 Census of Agriculture and related materials prepared in the Bureau of the Census and in the Agricultural Research Service and the Agricultural Marketing Service, USDA, "some jointly and some separately."

Thus, the scope and contents of the little volume are measured by the extensive coverage of the items presented in the census, and one wonders that so much can be encompassed within 187 pages; but the use of tabular statistics is commendably lim-

ited, and the language is terse, and the topical treatment is compact. Because of its somewhat weighty content and its rather technical nature, the book probably will not find a very wide audience among the general reading public, although there is a real need on the part of the body politic for a greater awareness of the materials it contains. No doubt the monograph will be welcomed by the professional clientele for whom it seems to have been especially designed, because it presents in brief compass what the census shows about agriculture's present role and significance in the national economy, as well as the changes that have occurred recently in the farm sector of our socio-economic life. The rural sociologist will be especially interested in the over-all view provided by chapters 8, 9, and 10, which deal, respectively, with "Group Interests in Agriculture," "Social Features of the Structure of Agriculture," and "Changes and Structural Strain."

WILSON GEE.

Department of Rural Social Economics,
University of Virginia.

The Agricultural Regions of the United States. By Ladd Haystead and Gilbert C. Fite. Norman, Oklahoma: University of Oklahoma Press, 1955. Pp. 288. \$4.00.

This volume, written by an agricultural counselor for the American Petroleum Institute and by a professor of history, is concerned mainly with the economic and geographic factors that make American agriculture what it is. The work is divided into twelve chapters. The first is of an introductory nature; the remaining chapters are devoted to descriptions of the agriculture in eleven geographic regions.

The book contains general information about land values, soil types, leading crops, yields, and changing directions in agriculture in each of the eleven geographic regions. Completeness of coverage is lacking, however, in the areas described. Frequent gambols into speculation, such as the origin of corn (pp. 11-13) and other historical developments, make for interesting reading but they do not appear to be closely related to the basic subject matter of the text. The reader will search in vain for answers the book purports to provide, according to the jacket, to questions such as "where to farm or ranch, what to grow, how to apply the newest methods and techniques."

Perhaps what may be both the strong-

est and weakest points of this volume is the cleverness with which it is written. The paragraphs are filled with flowing descriptions, which, however, could have been forcefully stated in one sentence. The all-out effort to make the book entertaining often overshadows the authenticity for which most readers will be looking. In describing the relative importance of different agricultural products, for example, the authors write: "That indigenous bird, the turkey, might be added, but it is doubtful if the comedian of the barnyard, with its all-time low in mentality, has added greatly to anyone's economy except our own, and that of very recent happening, even though the gobbler greeted the Pilgrim Fathers" (p. 10). Even the story of Henry Grady is retold for the reader (p. 111).

The reviewer finds it interesting that, with as many accepted authorities as there are in the United States on the subject matter covered in the book, not one of them is quoted either directly or indirectly. Footnotes are indeed a rarity, and the index could be improved upon. The subject covered is very broad, yet the list of suggested readings includes so few that they comprise a total of two pages of the work.

Although the reviewer may appear critical of this book, those who are interested in the different agricultural systems found in different regions should not be discouraged from reading it. Some good information is provided; moreover, most readers will find it highly entertaining.

R. L. SKRABANEK.

Department of Agricultural Economics
and Sociology,
Texas A. & M. College.

Indian Village. By S. C. Dube. Ithaca, New York: Cornell University Press, 1955. Pp. xiv + 248. \$3.00.

In what Opler terms a solid, standard, total community study which "only those who have struggled with the intricacies of Indian village material and have before them the task of ordering it can fully appreciate" (p. x), Dube describes the physical and demographic setting, and the caste, political, economic, and ritual structures and ethos of Shamirpet village in the Telangana region of Hyderabad State. Special chapters cover class, interpersonal relations, intergroup relations, and six decades of change. Though deliberately reserving materials for subsequent theoretical exposition, Dube has produced abstracted de-

scription which occasionally approaches culture-free sociological generalization à la Homans [cited in bibliography]. He presents dominant norms and main variations, and often sees personality as "explaining" the latter [perhaps indicating British social anthropological influence?]. Field-note quotations and case materials enrich his generalizations, particularly on social control (pp. 203-209).

The data were collected in 1951-52 under Dube's direction. The project was a combination of an anthropological community study and a social service extension project; the participants were from the Osmania University faculties in Arts, Agriculture, Veterinary Science and Animal Husbandry, Medicine, Engineering, and Education. Appropriately, the agricultural-economics, health, and nutrition materials are more concrete than in the average ethnography. Of Shamirpet's 380 families from 18 Hindu castes and an economically varied Muslim group, 120 families representing different castes, income levels, education, and urban contacts were intensively investigated. Supplementing usual ethnographic procedures, 80 episodic and topical life-histories and eleven full free-association biographies were recorded.

Dube's identification of the broadest horizontal caste ties—the area of marital unions—with the conventional culture-linguistic areas may delineate universes for studying intercaste relations and other problems. His tentative hypotheses, structural principles, and analytical categories may facilitate cross-village comparisons in India and, in some cases, elsewhere. Some of these are the following: ten factors which differentiate status (pp. 161-166) [space here does not permit the listing of this reviewer's reservations]; four types of intercaste economic dealings and obligations (pp. 58-59), [a correction of the view that intercaste relationships are entirely ritual]; six basic age divisions recognized in Shamirpet (p. 169) and their interaction (chap. 7); tabular presentation of the traditional sexual division of labor in household, field, ritual, and government (pp. 170-172); the concept "allied families," units of the potential extended or joint family (pp. 132-137), and material on joint family separation; "four basic principles" on which family structure is founded (p. 138); three population "levels" in terms of caste, class, education, and urban contacts (p. 138), used in discussing variations in family ideals and ethics

[Dube might have synthesized these with his four "Levels of Living," pp. 167-168].

The book needs more visual aids, especially a village map with caste household locations. The tight, readable terminology is a few times marred by ambiguity—"lineage" (p. 43), "sexual intercourse" [where "intermarriage" is meant] (p. 38), and "sections" versus "divisions" (p. 34). Specialists will find the caste presentation oversimplified, the bases for ranking castes vague, and the ranking chart (pp. 36-37) inconsistent with the discussion; also, they will desire more on distancing behavior. This reviewer, with experience elsewhere in India, missed classifications of the diverse categories of agricultural labor and the diverse kinds of joint families, and was amazed at the "only [sic] 79 cases of desertion and divorce" in 380 marriages studied (p. 122) and at the elimination of bachelorhood as prestige-gaining ascetic withdrawal (p. 132). Dube will surprise specialists in that he does not describe or even characterize kinship terminology to accompany his excellent material on structured interkin relations and to reinforce his analysis of status determinants—e.g., age. The exclusively positive evaluation of ritual (p. 93) implies rejection of Merton's "dysfunction" concept; fatalist ideology may indeed "maintain the structural unity of the society" but simultaneously impede technological change and social reorganization.

The discussion relating Shamirpet's changes to "major cultural trends operating in India as a whole" (pp. 230-231) makes *Indian Village* an excellent companion volume to the just-published *Village India*, which seeks, as Redfield puts it, a methodology for understanding "any great civilization (or rural-urban social system) and its enormously complex changes through anthropological studies of villages" [in McKim Marriott (ed.), *Village India*, American Anthropological Association Memoir 83, June, 1955, p. ix].

Indian Village, then, is excellent preclinical research for measuring directed change and the impact of new technological factors. How will India's community development program fare in Shamirpet, where the 220 tenant families fear to improve their lands (pp. 74-75)? Will political development continue to demonstrate "the strength of the traditional system [by] absorbing 'political group formation' and 'democratic elections' in its all-embracing caste structure" (p. 230)? Rural sociologists will want Dube and his highly suc-

cessful interdisciplinary team to continue their work in applied and theoretical social science.

JAMES SILVERBERG.

Departamento de Sociología y Antropología
Cultural,
Universidad Central de Venezuela, Caracas.

Making the Most of Marriage. By Paul H. Landis. New York: Appleton Century Crofts, Inc., 1955. Pp. xii + 542. \$5.50.

One views a new book on marriage with a certain amount of skepticism. Already there are many treatises on this subject. In general, they consider the same topics in essentially similar ways. Why, then, should another book be published? *Making the Most of Marriage* provides at least a partial answer to this question. It is a comprehensive, up-to-date consideration of problems which are old in the social experience of the human race, but ever new for the current generation of young people who approach marriage or are beginning to plan their family life.

The book is neatly divided into five parts: (1) "Marriage in the modern setting," (2) "The build-up to marriage," (3) "Learning to fit marriage," (4) "Parent-hood," and (5) "Crises in marriage." The latest research dealing with the various topics subsumed under these headings is interpreted and evaluated. There are many references to the writings of Ernest W. Burgess, Evelyn M. Duvall, Judson T. Landis and Mary Landis, and Reuben Hill. At certain places references are made to the Kinsey reports. Thus, it is clear that the author integrates and interprets a vast amount of material pertaining to marriage and family life. Only in one or two instances does he cite references to his own research. At times, through the use of such words as "need," Landis expresses his own opinions.

The style of writing is clear and vigorous. Selected readings and study problems and activities are listed at the end of each chapter. The method of dealing with the various topics tends to be eclectic. One could disagree at times with the position Landis assumes or defends. Here are some examples: The author rather uncritically accepts the feasibility, if not the desirability, of marriage when a young man or a young woman is a college student. The idea that marriage should be expected and planned for at an early age is accepted without serious question. Or again, one might be inclined to give less emphasis to sex matters. Despite a limited

amount of research and vital statistics which are cited, these are essentially matters of opinion. But certainly the author has a right to express his own judgment concerning them.

Throughout the book, the standards and values of the middle-class family in the United States are assumed and, in general, accepted. These turn out to be essentially the standards and values of the urban middle class, for data and discussion indicate that the traditional rural pattern of marriage and family relationship is passing into oblivion.

And so this review ends as it began: *Making the Most of Marriage* is another book on the subject of marriage—but a good book, one can add. Its merit consists of a frank, comprehensive, and objective treatment of topics which concern young people. Its limitations are inherent in the subject itself—its complexity and its dependence on research in related fields for more basic information on many topics which are inherently a part of marriage and family life.

CHARLES R. HOFFER.

Department of Sociology and Anthropology,
Michigan State University.

Your Marriage. (Revised edition.) By Norman E. Himes and Donald L. Taylor. New York: Rinehart and Company, Inc., 1955. Pp. xiv + 384. \$4.00.

"Another book on marriage?" This might be the reaction of many to Taylor's revision and enlargement of Himes' original text. However, Taylor has done excellent work. This isn't just another book, and it isn't just a re-paging of Himes' original book.

In Taylor's own words, "We have here frankly discussed premarital sexual experience, sexual, economic, psychological, and social adjustment in marriage, insurance, consumer credit, and sterility. We have also included chapters on child training, home management, and the important task of becoming a part of community living. . . . Accordingly, throughout this book there is an emphasis upon the chief worries and desires of young adults." He might also have stated that the book begins with a frank statement of "point of view" of the author, discusses various relationships and problems of courtship, moves on to the marriage relationships, and includes quite completely the aspects of family living.

Again, in Taylor's words, "Some of Himes' editorializing has been eliminated

because in many instances his editorial battles have been won. However, opinions and values are still part of the book. It is hoped they will be considered as such." The elimination mentioned above has improved the volume.

The reviewer considers this to be an excellent book for students in classes in marriage, for young people contemplating marriage, and for married couples who wish to review objectively their own marriage relationships. It is quite extensive in its coverage, and includes many helpful references as well as many significant data. The author not only has cited recent research results and source materials but has helpfully compared the new and older data in several areas under study. He has not hesitated to use "old" references when the data are still pertinent and applicable.

From the teacher's viewpoint, this book will be most useful to those who are offering one or two general courses in marriage. Those who offer more courses in this field will find *Your Marriage* most useful as a reference, or will select the parts that are most pertinent for a particular course and supplement them with other sources. In either case, the book will be a helpful teaching tool. Its liberal references with each chapter and in the footnotes will assist students and teachers.

The strong points of the book include its extensive coverage, good handling of data, and supporting references. Some may criticize the authors' direct and frank discussion; but it is a healthy presentation for mature readers.

If this volume has any significant weakness, the reviewer would point to the authors' attempt to cover too much material. Obviously, they have had to select and edit. One might wonder why "Shall We Buy, Build, or Rent a Home" (chap. 14) and "The Best Insurance Buy" (chap. 18) were selected instead of some other aspects, such as clothing the family or furnishing and planning the home. However, this reviewer is not overly critical of these choices, or of the necessarily brief treatment of certain aspects of marriage problems and adjustments. Some readers may be critical of the authors' apparent assumption of the maturity of his readers, but perhaps this is a reasonable assumption.

GERALD T. HUDSON.

College of Agriculture and Home Economics,
University of Arkansas.

The Sociology of Play, Recreation, and Leisure Time. By Florence Greenhoe Robbins. Dubuque, Iowa: Wm. C. Brown Company, 1955. Pp. vii + 389. \$5.75.

Those who teach the sociology of leisure or theory courses in recreation will find this a most welcome reference, if not a text. The probing for facts in what happens to people when they play will be useful in motivating social action. It is best suited for those in the formal education field, however. The book's approach is value-oriented, which makes it useful for student understanding and motivation; it should serve the same purpose for social recreation workshops and training schools conducted by informal recreation educators.

The book is an 8½" x 11" paper-bound publication containing some photographs, tables, charts, outlines for projects, and bibliographies for the areas treated, such as one would find in a text developed from eight years of teaching in the area of leisure and recreation.

Part I contains three chapters dealing with play, leisure, and recreation as sociological concerns. The first is a statement of the contemporary scene. The second is a well-chosen cultural-history calendar of leisure and recreation. The third establishes the author's philosophy of recreation. Here she deals with recreation and personality, beginning with eight of the theories of why we play. This is followed by a refreshing treatment of "the arisal and development of personality," which in turn is followed by a discussion of the rhythms of child growth and play development. Chapter three concludes with "the role of recreation in personality adjustment and mental health."

Part II is an examination of selected areas of leisure and recreation. Here the roles of family, school, church, camp, and youth-serving agencies in the field of recreation and leisure education are discussed. Also, the roles of dance, art, drama, books, and music have been singled out among the social art forms. The section on dance will be useful for social recreationists or teachers of social activities who wish to stimulate student and lay leader in thinking beyond the "tool" stage for group activity. Industrial recreation is not as fully treated as the sections on recreation therapy. "Leisure and Recreation for Specialized Groups" is a chapter on educational recreation for the physically handi-

capped and recreation for the aging. The outstanding chapter in Part II is the splendid treatment of the role of commercialized recreation. Public recreationists, especially, will find this chapter of 37 pages informative and useful. Topics discussed include trends in the leisure market, liquor, migrants, the role of mechanical means of transportation and its effect on personality and social life in general, professional athletics and commercialism in amateur athletics, the poolroom, fairs and expositions, gambling, the circus, public dance places, movies, television, comics, and radio. A very critically selected bibliographical list is included.

Part III has three chapters dealing with the community approach to recreation, leisure, and play. One deals with backgrounds of play, recreation, and leisure time, using selections from sociological studies. Chapter 18 includes selected examples of community approaches to recreation and discusses advantages and disadvantages of each. The concluding chapter is a sociological retrospect of play, recreation, and leisure time.

It is difficult to manage a book of this magnitude, and the author is to be commended. The reviewer felt some omissions in music, physical sports, and nature in the discussion on roles played by social art forms. The treatment on camping did not include or concern itself with private and agency camping; but the unfolding of a unique experience in family camping and the thorough discussion of school camping makes this publication a valued reference in those categories.

E. H. REGNIER.

Rural Recreation Extension,
University of Illinois.

The People Act. By Elmore M. McKee. New York: Harper and Brothers, 1955. Pp. xi + 269. \$3.50.

Cooperation and social responsibility are human traits that are not genetically transmitted from parents to offspring. People are not naturally democratic, but learn to be democratic. One can state categorically that few Americans have been taught to practice these noble ideals. If such were the case, one would not find so many decadent and disorganized communities comprised of an apathetic, complacent, and lethargic citizenry devoid of community responsibility. Millions feel insecure and impermanent and are plagued with an attitude of "what's-the-use" or "let George do it." Participation in community life is

almost nil, and what little community responsibility that does exist is sapped by the multiplicity of divisive civic and social organizations. As a consequence, the average community is sleeping and drifting aimlessly. Social change occurs, but it is accidental and haphazard, and not the result of foresight and planning.

Recognition of this state of affairs has culminated in a new discipline—the field of community development. Community development, as distinct from social change, is the purposive alteration of conditions. Life is purposely planned and directed, and people assume responsibility for guiding their own destiny. But rare indeed is the American community that makes any concerted attempt to chart its own future. In *The People Act*, Elmore McKee relates the stories of eleven of these unusual communities and how the people worked together to plan their future. The communities differed markedly in terms of the nature of the problem attacked and the method of solution. Six are farming areas or small towns, four are large cities, and one is a county with a county-wide development program.

Two of the tentatively established principles of community development were disregarded in the Baltimore slum clearance program. First, it was a top-down program and was forced upon the people before they were cognizant of the need for action. Second, the principle of local citizen initiative, responsibility, and self-determination was unheeded.

One of the most common weaknesses of community development programs is that only one phase of living is considered for change. Then, after one specific project is completed, enthusiasm dies and the program ends. This happened in Gary, Indiana, and to a lesser extent in Arlington, Virginia, where programs were concerned with only one matter, syndicates and schools, respectively. In contrast, the Tin Top, Texas, community development program dealt with all areas of living and the accomplishments were outstanding.

Many people have undertaken the direction of community development programs during the past two decades. The techniques have varied markedly. So have the results. The principles and procedures of this field have yet to be rigorously formulated and tested. Research is needed on programs organized on an experimental basis. For example, knowledge that such and such would happen if a certain action were taken under specific conditions would

be extremely useful. Before the field of community development can progress very far, this type of knowledge is needed.

JAMES D. TARVER.

Department of Sociology and Rural Life,
Oklahoma A. and M. College.

The Church in Our Town. (Revised edition.) By Rockwell C. Smith. New York and Nashville: Abingdon Press, 1955. Pp. 220. \$2.50.

This revised and enlarged edition appears ten years after the book was first published in 1945. In the Foreword, the author states that he has attempted to correct certain faults of his first edition: "My own resistance to recognizing the social-class system in rural America, an inadequate understanding of the relationship of farm prices to land tenure, and a somewhat less-than-humble attitude of criticism toward organizations and agencies with whose policies I did not agree."

The Church in Our Town, a book for rural ministers, draws on the disciplines of rural sociology, agricultural economics, and church administration. For the minister with little sociological training, this book is valuable for an understanding of the church in the rural community. While not designed specifically as a text, it can be used successfully as such in courses on the rural church in theological seminaries.

The book is helpful toward an understanding of the role of the church and its relationship to other community institutions, organizations, and groups. The author is a rural sociologist and a churchman who is engaged in the practical role of interpreting rural life to town and country ministers.

The comparison of rural and urban types is an oversimplification. The author has "purposely exaggerated"; even so, the use of theoretical materials with which he is familiar would have strengthened this section of the book.

The interdependence of town and country is stressed throughout. The rural church cannot afford to be provincial in its outlook. It is to be a cohesive and not a divisive force; it is to be cooperative and not competitive. The organizations of the community are to be allies in personality growth and community development.

Methodological aids are given the rural minister on the use of maps, census materials, and tables for analyzing his own efficiency and effectiveness. Problems related to land ownership and conservation

are treated historically and sociologically, and then practically in reference to the program of a local church and denominational policy.

The material on "Rural Trade" and the chapters on "The Community and the Role of the Church" are helpful in their understanding of conflict situations and of the church as "an agency of intercommunication." The description of the function of the rural church provides an excellent review of its social responsibility as cooperator, community "conscience," supplement, experimenter, and trainer of community leaders.

VLADIMIR E. HARTMAN.

Washington Federation of Churches,
Washington, D. C.

Billy Sunday Was His Real Name. By William G. McLoughlin, Jr. Chicago: University of Chicago Press, 1955. Pp. xix + 325. \$5.50.

This is an interesting and informative book. The author's purpose in studying Sunday is to see "the deeper significance of his career as the product and expression of the era in which he lived." McLoughlin is highly successful in this. The reader is given a great deal of lucidly presented historical and biographical data to help in understanding the period and the man, and he is given statistical data to help assess the effects of Sunday's preaching.

The book is organized into a prologue and eight chapters. The prologue describes the most highly successful part of his career—the "conversion" of New York, as he and his defenders saw it at the time—and then states the purpose of the study. In order, the chapters describe several facets of Sunday's life: his background and early years; the more mature development of his work; the type and efficiency of his organization (the chapter is called "Two Dollars a Soul"); his theology and moral philosophy; his pulpit manner and technique; the audience who listened to him; an assessment of his effects, both real and imagined, on the souls and morals of his audience; and, lastly, his declining years.

The author is not a sociologist and is apparently unacquainted with either the sociologist's methods of describing the social and cultural context of human events or the collective behavior psychologist's methods of analyzing the relations of a leader to his followers. In the reviewer's opinion, the work would have communicated more accurately and clearly the no-

tions of the author if these methods had been used. For example, the book would have been better if a clear picture of the general outlines of American social structure and values of 1890-1920 had been drawn. Furthermore, it would have helped to have presented a clearer and more realistic appraisal of the motives of Sunday's audiences, although this aspect was handled in a fairly satisfactory way.

In spite of the foregoing, the book provides an excellent portrayal of Sunday and a good portrayal of his society. But the society in which he worked was not rural, and, while the book will be of interest to the sociologist, it does not have much special relevance for the rural sociologist. It is probably true, as the author says, that Sunday's point of view was heavily influenced by his rural mid-Iowan childhood, but there can be little doubt that most of his popularity and influence was among middle-class urban people (p. 212).

ARCHIE O. HALLER.

Department of Rural Sociology,
University of Wisconsin.

Social Problems. By T. Lynn Smith and Associates. New York: Thomas Y. Crowell Company, 1955. Pp. x + 517. \$4.75.

This text merits and probably will achieve wide popularity. For one in which nearly every chapter is written by a different author, it maintains to an unusual degree high quality throughout. The content is up-to-date and in general well selected. The fact that it contains many ideas not generally found in introductory texts in social problems and omits considerable information that commonly is found in these texts is more of an asset than a weakness, whether it is used as the main text or as a supplementary one. About the right amount of statistical data is included, although it is unevenly distributed.

The style of writing is surprisingly lucid in virtually every chapter. Awkward, hard-to-understand clauses and phrases are very rare. Verbosity and ambiguity are avoided. The organization of topics and the use of section headings is excellent. Not one printing error was noticed by the reviewer.

The scope of topics covered is very wide. Chapter titles not commonly found in an introductory social problems text are: Manpower and Labor-Force Problems, Rural Problems, Urban Problems, Economic Problems, Industrial and Labor

Problems, and Problems of International Relations. Teachers who wish to omit a few of the chapters will still have ample topics for a regular course.

The weaknesses are limited. Some teachers will object to the unlabeled mixture of value-judgment statements with factual statements which occurs in some chapters. An occasional generalization in two or three chapters is unqualified and too sweeping if interpreted literally. Only a couple of factual errors were noted, and they were probably caused by unfortunate wording. The chapter on economic problems contains four pages of theories of highly variable quality with no evaluation given. The scarcity of such weaknesses provides evidence that this text was not just thrown together.

MELVIN S. BROOKS.

Department of Agricultural Economics and Sociology,
Agricultural and Mechanical College of Texas.

The Crime Problem. (Revised edition.) By Walter C. Reckless. New York: Appleton Century Crofts, Inc., 1955. Pp. x + 728. \$6.50.

This is a revised and an enlarged edition of a book by the same title, published in 1950. The introductory chapter has been entirely recast. The chapter devoted to the etiology of crime has been enlarged to two chapters. Among chapters that have been added are one on female crime and one on abnormal sex offenders; other new chapters discuss the nature of punishment, changes in the system of punishment, the origin of and substitutes for imprisonment, and prison developments in the United States.

Chapters retained from the 1950 edition have been brought up to date, to include in the present edition latest developments in organized crime, the controversy among sociologists concerning white-collar crime, recent researches on alcoholism and on teen-age drug addiction, and the findings of recent national meetings and investigations of juvenile delinquency. Like the first edition, this one contains illustrations of some of the best and worst jails and other correctional institutions. There are numerous case reports illustrating concretely some of the matters discussed in the chapters. As in the first edition, at the end of each chapter there is a list of questions for the aid of students and new instructors, followed by a selected list of references considered by the author as the

most important literature pertinent to the subject just discussed.

While some workers in the field will differ from the author in some respects, such as in the organization of the material, this is one of the most challenging texts which has appeared in the field of criminology.

JOHN L. GILLIN.

Department of Sociology and Anthropology,
University of Wisconsin.

BOOKS RECEIVED

Anticipating Your Marriage. By Robert O. Blood, Jr. Glencoe, Ill.: The Free Press, 1955. Pp. xviii + 482. \$5.00.

Dynamic Urban Sociology. Edited by William E. Cole, Harrisburg, Pa.: The Stackpole Company, 1954. Pp. 336. \$3.95.

Earning Opportunities for Older Workers. Edited by Wilma Donahue. Ann Arbor: University of Michigan Press, 1955. Pp. x + 277. \$4.50.

Economía de la Vivienda Rural Tropical. By Roy J. Burroughs. Centro Interamericano de Vivienda, Servicio de Intercambio Científico, Bogotá, 1954. Pp. 25. No price given.

Exploring the Small Community. By Otto G. Hoiberg. Lincoln: University of Nebraska Press, 1955. Pp. 199. \$3.50.

Growth and Changes in California's Population. By Warren S. Thompson. Los Angeles: The Haynes Foundation, 1955. Pp. xxx + 377. \$5.00.

An Introduction to Social Research. Edited by John T. Doby. Harrisburg, Pa.: The Stackpole Company, 1954. Pp. 275. \$3.75.

Las Relaciones Comunales en la Vivienda Urbana de Bajos Arraendos. Centro Interamericano de Vivienda, Servicio de Intercambio Científico, Bogotá, 1954. Pp. 23. No price given.

Agricultural Credit. Royal Commission on Agriculture and Rural Life, Report No. 3. Regina, Saskatchewan: Government of Saskatchewan, 1955. Pp. xiii + 131. \$1.00.

Selected Readings in an Introduction to Sociology. Edited by Warner E. Gettys, Walter Firey, Laurence Foster, and C. W. McKee. Harrisburg, Pa.: The

Stackpole Company, 1954. Pp. 412.
\$3.95.

Sociologie Comparée de la Famille Contemporaine. Colloques Internationaux du Centre National de la Recherche Scientifique. Paris VII: 13, Rue Anatole—France, 1955. Pp. 218. Fr. 1,000.

Suburbanization of Manufacturing Activity within Standard Metropolitan Areas. (Studies in Population Distribution, No. 9.) By Evelyn M. Kitagawa and Donald J. Bogue. Scripps Foundation

for Research in Population Problems, Miami University, and Population Research and Training Center, University of Chicago, 1955. Pp. vi + 162.

Suburbanization of Service Industries within Standard Metropolitan Areas. (Studies in Population Distribution, No. 10.) By Raymond P. Cuyport. Scripps Foundation for Research in Population Problems, Miami University, and Population Research and Training Center, University of Chicago, 1955. Pp. vi + 71.

BULLETIN REVIEWS

Edited by Louis J. Ducoff*

REVIEWS PREPARED FOR THE SEPTEMBER ISSUE

Development of Agriculture's Human Resources: A Report on Problems of Low-Income Farmers. U. S. Department of Agriculture, Washington, D. C. 44 pp. Apr. 1955.

This brief report could be as significant for a broad attack on the problems of low-income farm people in the United States in the years ahead as the report of the President's Committee on Farm Tenancy in 1937 was significant for the development of a consistent attack on land tenure problems. It was prepared in compliance with President Eisenhower's special message on agriculture to Congress, in January, 1954. The National Agricultural Advisory Commission, agencies of the Department of Agriculture, and other federal departments and nongovernmental groups participated in developing the report.

The report describes the number, trends in number, distribution, and selected characteristics of low-income farm-operator families as indicated by census data. Some 1.5 million farm-operator families had a net cash family income from all sources of under \$1,000, as of 1950. Particular emphasis is given to the nine generalized problem areas delineated on a state-economic-area basis, using three criteria (net income of full-time farmers, level of living, and size of operation). Within these areas live nearly one million farm families with farm operators under age 65 and engaged primarily in agriculture, and with a value of products sold of under \$2,500. Important differences in educational level, racial composition, land resources, tenure, and mechanization are revealed when the problem areas are compared with the rest of the United States, and when the problem areas are classified by three levels of severity. Sixteen tables and five figures provide supporting data for the analysis of the low-income farm situation.

Fourteen general recommendations are followed by more detailed suggestions for action with respect to extension and technical assistance, research, services for part-time farmers, credit, nonfarm employment information, zoning and land acquisition, industrial development, vocational training and guidance, health, and social security. The approach is "regarded as primarily educational and developmental with special

attention to rural youth." There is little new in the details of proposed action. Practically all suggestions have been tried on a large or small scale, or have been proposed for a decade or more. What is new is the notion of an annual report to the President on the progress of an integrated program and the greater emphasis on local and private resources. The recommendations soundly recognize that improving the situation of low-income farmers is a long-term process, requiring integrated and differentiated measures. The report, however, does not seem to give adequate recognition to the institutional and cultural barriers encountered in work with low-income farmers.

Rural sociologists should be pleased with this report. The general student of rural life in the United States will gain additional insight about the farm population. The sociologist concerned with public policy has a valuable addition for his work in the low-income field. The pointed suggestions for research which are within the competency of the rural sociologist are so numerous that they could easily monopolize, for some years, all the rural sociological research resources now available in the United States. The extension sociologist should find an increased demand for his services if the recommendations dealing with community development and county and community planning committees are put into effect.

In fact, the great stress in this report on the "development of human resources in agriculture" and on "farm people" and the many recommendations for research and extension which are clearly and often exclusively within the competency of the rural sociologist stand out in bold contrast with the progressive attrition experienced by rural sociology from Congress and administration since 1945. This attrition cannot continue if the recommendations on the "Development of Agriculture's Human Resources" are to be fully accepted.

This report is also available as House Document No. 149, 84th Congress, 1st Session, April 27, 1955, with Secretary Benson's recommendations to the President and the President's transmittal letter to Congress.

OLAF F. LARSON,

Department of Rural Sociology,
Cornell University.

*Assisted by Elsie S. Maany.

The Education of Migrant Children. Shirley E. Greene. National Council on Agricultural Life and Labor in cooperation with Dept. of Rural Education, National Education Association. Washington, D. C. 179 pp. 1954.

Children of Misfortune. Shirley E. Greene. National Council on Agricultural Life and Labor, Washington, D. C. 37 pp. 1954.

Four case studies of representative situations in communities along major migrant routes form the basis of this report. The areas include two "home-base" situations and two at the northern end of the migrant route.

From 35 to 100 per cent of the migrant families in each of the four areas were visited. Interviews were conducted only with those who had moved at least once across a county line to work in agriculture during the past 12 months and who had children between the ages of 6 and 18. These families totalled 665 and had 2,783 children. Of the children, 690 were under 6 years and 225 were over 18.

In addition to reporting the grade progress of migrant children, the author identifies individual and family characteristics and the characteristics of schools and communities that have a bearing on whether or not a child attends school on a regular basis. He compares his findings with those of earlier studies. As in other studies, this one shows too little schooling for too many children, with the needs of the family pocketbook, crop vacations, and the exigencies of mobility coming between child and school in too many cases.

The report concludes with a chapter describing an experiment in building a curriculum adapted to the needs of migrant children. The experiment was conducted in the Oak Center School near Waupun, Wisconsin, during the summer of 1953. Reference to it is included because of its relevance to the problem of meeting the needs of migrant children through curriculum adaptation. The experiment did not have a relationship to Shirley Greene's study.

Based on the results of the four-community study and the Waupun experiment, plans for a two-county project were developed in Palm Beach County, Florida, and Northampton County, Virginia. A supervisory specialist in migrant education started work in these two counties, in 1954. She is employed by local school boards and is paid by the project sponsors.

In addition to the research report, the author has prepared a brief, popular version

of the results of his study. For this version he takes his title, "Children of Misfortune," from the first chapter of the report of the President's Commission on Migratory Labor published in 1951. The popular pamphlet broadly outlines study findings without giving detailed statistics. It is slanted to stimulate community action rather than simply to present facts.

HELEN L. JOHNSTON.

Public Health Service,
U. S. Department of Health, Education,
and Welfare.

Health in Rural Louisiana at Mid-Century. Homer L. Hitt and Paul H. Price. La. Agr. Expt. Sta. Bull. 492, Baton Rouge. 63 pp. June 1954.

In this bulletin, Hitt and Price offer another in a series of noteworthy studies in health research coming from their department within recent years. The publication comprises sixty-three pages of text, tables, and figures which present a summary of health data that is both succinct and comprehensive. While the study specializes on the rural segment of the population, it illuminates an area of demography in which the findings will be most welcomed by both researchers and the general public.

The burden of the presentation is carried by a series of skillfully constructed charts in the form of shaded maps. The cartography is well done and is certainly an effective manner of presentation. An appendix of tables contains facts and figures for those interested in technical details or individual values.

The study is primarily a report of the well-being and health status of a large population group as reflected in mortality rates and related indices. This is accomplished through the use of five forms of measurement and analysis. A comprehensive treatment of differential mortality initiates the presentation. Attention to the infant death rates and to life expectation round out the interpretive use of death rates. The other two "yardsticks" for measuring health status are leading causes of death and mortality trends in the decade 1940-1950.

It is the contention of the authors—shared, of course, by many others—that general conditions of health and hygiene are reflected through these rates and indices. They say: "It may be confidently assumed that an area with a high death rate is also characterized by a high incidence of disease. Consequently, mortality data provide valuable information concerning prevalence of disease and general health" (p. 6).

Both crude and standardized death rates are used in the mortality section. The standardized rates make parish (county) rates comparable, in many cases, where differences in age structure might preclude meaningful comparisons.

It is not practical to summarize the findings in the space available here, but three key observations, from the authors' own conclusions, will be mentioned. They find that: (1) the people of rural Louisiana continue to enjoy a lower (crude) death rate than the urban people, but the differential is narrowing with the passage of time; (2) females and white persons have a more favorable mortality experience than do males and nonwhites; (3) a sharp decline in infant mortality has been noted within the decade.

In conclusion it may be observed that these data can be of much value not only to the people of Louisiana but to many others, especially as comparable data are collected in other states.

JOHN N. BURRUS.

Department of Sociology,
Mississippi Southern College.

Health Resources in the Northern Great Plains. Anton H. Anderson. Neb. Agr. Expt. Sta. Misc. Pub. 4 (Great Plains Council Pub. 10), Lincoln. 79 pp. Aug. 1954.

This bulletin summarizes a study of health resources in Kansas, Nebraska, South Dakota, North Dakota, Montana, and Wyoming. The study was sponsored by the Northern Great Plains Agricultural Council through a Health Committee of lay and professional people interested in this general field.

A considerable part of the report consists of inventories of health facilities in the area. Physicians, dentists, nurses, county health units, hospitals, ambulances, and other facilities are presented graphically on maps to show variation over the region on a county-by-county basis. Tables, in the appendix of the report, present these data in greater detail.

The analysis of health facilities as related to population concentration shows considerable variation over the area. Some of the more favorable ratios of health resources to population are in the sparsely populated counties, but lack of communication and general accessibility make these critical problem areas. To cope with the nature of this relationship and to serve as a more valid measure of the needs of the population for health resources, the study makes

use of a *Health Resources Index*. The index combines the physician-population ratio with the square miles per physician location and thereby gives weight to the larger area over which resources in a sparsely populated county must be spread. The effect has been to take into consideration the greater accessibility of physicians and other related resources in more densely settled areas.

The *Health Resources Index* presents a less favorable picture for the western part of the Great Plains. From this point of view, the greater resources are to be found in Kansas and Nebraska and generally along the Missouri River. Nearly all of Montana and Wyoming fall in the two lower quartiles of the index.

A further section of the report is devoted to an analysis of "Local Judgments" concerning the needs of the people for health facilities and difficulties in meeting these needs. County study committees were asked to report what they considered the greatest health needs in their county and the main difficulties in meeting these needs. The need for public health nurses was reported most frequently, with health and safety educational programs second. The third most frequently reported need was for doctors. The cost of health facilities and health programs in rural areas was the most frequently expressed difficulty and was reported by nearly half of the study groups. Listed needs and obstacles come largely from the more sparsely populated counties.

A limited analysis is made of health programs operating in the area. These include programs of federal, state, and local governmental agencies and of nonprofit hospitalization and medical insurance plans. Again, the data indicate a greater unmet need in the sparsely settled areas.

The report is an attractive and scholarly piece of work. It not only can serve as a bench mark against which changes can be measured, but it also suggests the type of programs needed and some of the problems that will be encountered in securing these services.

The index makes a particular contribution in suggesting a way of dealing with the problem of measuring adequately the health resources of rural and farm populations. Anyone concerned with the ratio of health resources to population should review the methodology of this index.

C. L. GREGORY.

Department of Rural Sociology,
University of Missouri.

The Potentials of an Aging Population: A Survey Made in Meriden, Connecticut. Walter C. McKain, Jr. Conn. Agr. Expt. Sta., Storrs. 125 pp. Oct. 1954.

This study, which was sponsored by the Connecticut Commission on the Potentials of the Aging, represents a remarkable adaptation of research to the needs of action programs and legislation. Problem areas are clearly delineated and form the basis for the commission's recommendations, which are also included in the report.

The first part of the report discusses the ecology, characteristics, and problems of the aging and aged in Connecticut. This analysis is supported by data from several federal and Connecticut statistical offices. The general orientation is followed by an analysis of a sample survey taken in Meriden, Connecticut, in 1954. Sample survey data were obtained from four types of detailed schedules. The health schedule was evaluated by the Connecticut State Department of Health independently of the other schedules. In addition to health status, data on age, sex, nativity, marital status, education, employment status, occupation, hobbies, retirement preferences, and retirement expectations of older persons are presented.

The analysis of the Meriden data consists of a comparison of the potentials, hopes, and expectations of the aging (persons aged 55 to 64 years who were employed at some time in that age interval) with the actual circumstances of the aged (persons 65 to 74 who were employed when they were 55 to 64 years of age). This is accomplished by matching the social, economic, and health circumstances of the aging with those of the aged. The study indicates a deterioration of many of these circumstances from the younger to the older ages. The problem is found to be most acute in the areas of employment, income, and health. Certain problems often associated with aging, such as loneliness and too much leisure time, were not found to be serious, either as fears among those aged 55 to 64 or as actualities among those 65 to 74. Other anxieties, such as those concerning living arrangements, apparently do not materialize as problems in the older ages. The study also found that employers were generally favorably disposed toward hiring and retaining older workers but lacked adequate programs for dealing with the work problems of these older workers. The author concludes that greater utilization of the aged in our economy would benefit both society and the older person.

Data in the sample survey were obtained

by a random-quota type of sample of individuals and a stratified sample of employers in Meriden. The sample consisted of 694 men and 131 women aged 55 to 64, 396 men and 82 women aged 65 to 74, and 42 business establishments. Since the quotas for individuals were based on the 1950 census counts, any differential changes in the age composition of the sample areas—either through aging or migration—are not reflected in the sample. However, there is no apparent source of bias in the sampling procedure.

The author is to be commended on his excellent coordination of tables and analyses. The relationships which are evaluated are presented in a large number of small, easy-to-read tables instead of a series of detailed tables. And for easy perusal, they are incorporated in the text adjacent to pertinent discussions.

Totals of many distributions in the report were rather small. Thirty-one of the ninety-five tables based on the survey of individuals contained one or more distributions which totalled less than fifty cases; five had distributions totalling less than ten cases. One table showed that 75 per cent of the four persons with a specified source of income were also in poor health. Another table showed that 56 per cent of 9 unskilled workers were in poor health. The author recognized the limitations of these small frequencies; but he might have made some of the tables more effective if he had grouped some of the distributions into an "all other" category. In addition, the inclusion in the report of a table of sampling errors would have helped readers to evaluate relationships independently.

Another problem in an analysis based on percentage distributions is the selection of the direction in which data are to be distributed. In some tables, data would have been more meaningful if the horizontal-vertical direction for distributing percentages had been interchanged.

Apparently, the administrators of the survey were faced with a high non-response rate in certain categories. The non-response rate for seventeen tables exceeded 10 per cent, and in one table exceeded 20 per cent. This could be rather serious for tables that included small rim totals.

The concept of the labor force as used in the study is not specifically defined, and it is obviously at variance with general usage. In general, the study identifies "in the labor force" with the employed. The category of the unemployed includes those not in the labor force as well as the unemployed component of the labor force. This lack of dif-

ferentiation between the unemployed and those not in the labor force is unfortunate, because the distinction would have provided a refined technique for analyzing one of the most serious problems for the aging and aged.

This conceptual difficulty is further complicated by the treatment of major occupation group. In some tables, occupation is shown for the employed only; in others, occupation is shown for a combination of the employed and the experienced unemployed. The latter usage approaches the "gainful worker" concept. On the other hand, tables based on census and Labor Department data in the first part of the report conform to the usual definition of the labor force.

On the whole, the study represents excellent survey procedures and an interesting, honest, and ingenious analysis.

SIEGFRIED HOERMANN.

Agricultural Marketing Service,
U. S. Department of Agriculture.

The Farm People of Washington at Mid-Century. W. L. Slocum and C. L. Stone. Wash. Agr. Expt. Sta. Bull. 557, Pullman. 39 pp. Feb. 1955.

It is becoming more and more difficult to differentiate between the characteristics of farm people and of nonfarm people. Improved communications and transportation, together with equalized standards of living and exposure to the same economic forces, are breaking down a long-accepted dividing line which is still used as a guide in the collection of census data and in the choice of sociological or economic research problems by students.

This study sets up as its hypothesis "that farm people not only possess certain personality traits that are distinctive but that they also possess certain population characteristics involving family composition, standard of living, level of education, and other matters which are presumed to be different from those found among the urban and rural nonfarm segment of the population." By analysis of the 1950 census and other secondary data, the authors provide an interesting discussion of the trends and characteristics in the farm and nonfarm groups.

They point out that while the farm population is only 11.5 per cent of the total state population, this proportion is considerably increased if the three major metropolitan counties are not included. The farm population is over 30 per cent for at least 10 counties. In common with other regions

of the United States, however, there has been a continual decline in the number of people dependent on farming as a major source of income. Between 1940 and 1950 the largest outgoing migration was among young people who had been 10 to 19 years of age in 1940 and 20 to 29 years of age in 1950. This coincided with industrial development and employment opportunities in the state.

The farm population under study includes residents of land units with 3 acres or with an income of \$150 or more from farming. This means that many units classified as farms rely on outside work for supplementary income. As the authors show, 43.5 per cent are part-time or residential farms, and only 26 per cent of all farms reported farm sales of over \$5,000 in 1949. In many ways it is unfortunate that the analysis must, of necessity, follow so closely the census classification. There is room for further testing of farm-nonfarm differences by the use of more homogeneous classifications than are provided by these data.

The authors conclude that farm families were larger, farm adults were less well educated, aged parents were more often found in farm homes, and farm income tended to be lower than nonfarm income. It would be well to point out, however, that these differences can vary considerably with the choice of basic data, the definition of farm, and the choice of income measures. Perhaps a more rigid definition of a farm could be adopted and sample studies used to bear out the findings.

Agricultural policy considerations are governed by the number of farm people in a region and their opinions. It would be an addition to the understanding of adequate farm policy if the questions raised in this bulletin were carried further and the hypothesis tested that the economic as well as personal characteristics of farm operators and their families are essentially different from nonfarm residents.

The bulletin proceeds to give a well-ordered description of the farm people of Washington State within the imposed limits of the 1950 census. It is a contribution to the understanding of population dynamics, and one would hope it will be the foundation for further studies in this area.

J. R. BOWRING.

Department of Agricultural Economics,
University of New Hampshire.

Fringe Families and Their Social Participation. W. A. Anderson. Cornell Univ.

Agr. Expt. Sta. Bull. 909, Ithaca, N. Y. 47 pp. Apr. 1955.

This study examines the implicit hypothesis that special factors involved in movement from a city to the fringe area are associated with changes in social participation; furthermore, that these changes are differentially influenced by stages in the family cycle and locus of residence in the fringe.

The theory and methodology of this study resemble those of previous social participation studies by Anderson. Social characteristics of 378 families (75 per cent of the 504 fringe families) who had previously resided in Ithaca were obtained by personal interviews, in the fall of 1953.

In general, families did not change their social participation patterns to any great extent after moving to the fringe. For the most part, city organizational ties were retained. The average number of organizations each husband belonged to increased from 2.8 in the city to 3.1 in the fringe; for wives, the average number changed from 2.3 to 2.7. Social participation increased for 41 per cent of the families, remained the same for 39 per cent, and decreased for 20 per cent.

The culture of the fringe area favors social participation of growing families. Seventy per cent of the fringe families were in a child-rearing stage. As a result, the young-older (some children are less and some older than 10 years of age) and the older-child (all children are 10 years of age or older) families most often increased their participation, while the post-child and widow-widower families most often showed a decrease. Younger families increased while older families decreased organizational memberships. Hence, participation in P.T.A. and in Home Bureau and Farm Bureau increased. Participation in lodges, a type of organization more likely to attract older families, showed a decrease. Visiting with former city neighbors decreased, but new visiting patterns with fringe neighbors were substituted.

Social participation in organizational activities was influenced by the section of the fringe in which the family was located. Families tended to move to those areas of the fringe having social and economic characteristics similar to the areas from which they moved. The social and economic status groupings of fringe residents were reflected in differential social participation patterns.

In one section of the fringe that had a large percentage of its families in the pre-and-young-child stage, more families re-

ported a decrease in social participation than reported an increase. In other areas, the percentage of families who increased participation varied only slightly.

This study contributes to the accumulation of data on the sociology of the fringe. A shortcoming of this report is the absence of any mention about the relationships between this study and previous fringe research by Whetten, Martin, Kimball, and Blizzard. Nor does the author satisfy the desire of Hague, who reviewed a shorter report of this same study, that he relate the findings to his previous studies of social participation and the family cycle. The method used to delineate the fringe is not stated. Although changes were small for most types of social participation, no statistical tools were used to measure the significance of such changes.

EMORY J. BROWN.

Department of Agricultural Economics
and Rural Sociology,
The Pennsylvania State University.

An Analysis of Divorce in Nebraska. Kenneth L. Cannon. Neb. Agr. Expt. Sta. Res. Bull. 174, Lincoln. 26 pp. Jan. 1954.

The first part of this bulletin presents a verbal, numerical, and graphic description of the volume and rate of divorce in Nebraska, during the decade 1940-50. Annual changes are shown in comparison with similar changes in the United States as a whole. This comparison shows that the Nebraska divorce rate was consistently below that of the nation.

The second part of the report treats the data somewhat more analytically to show the relationship between divorce incidence and urbanization of the population within the state. In accordance with expectation, divorce rates by county groups were directly related to degree of urbanization. Further analyses showed, however, that regional differences in divorce rates appeared which were not attributable to rural-urban differences.

A. R. MANGUS.

Department of Agricultural Economics
and Rural Sociology,
The Ohio State University.

Consumer Cooperation in New Mexico. David B. Hamilton. Business Inf. Ser. 26, Bur. of Business Res., Univ. of N. Mex., Albuquerque. 31 pp. 1955.

Cooperative economic effort has a peculiar fascination for many people. Along with others, the reviewer has been "pre-

disposed by nature" to feel that cooperative economic organization has inherent qualities superior to other forms. An objective look at the practical problems associated with cooperatives and the reasons for cooperative organization raises some questions. For example, the author says, "Consumer cooperation can also be distinguished from other modes of economic organization in that the locus of control is the consumer. In the usual business organization control of the enterprise is a prerogative of the owners or their representatives and the consumer is of primary interest as a source of revenue. Frequently the welfare of the consumer is of slight significance. In the consumer cooperative, on the other hand, consumer interest is paramount" (p. 7).

It seems evident that for the consumer to continue as a source of revenue, the conventionally operated business would have to serve the interests of the consumer. Monopolistic activity would, of course, be an exception to this.

This bulletin is the report of a survey of the extent of cooperative business activity in New Mexico, from 1939 to 1954. It is divided into five chapters: "Cooperative Background," "The Model Cooperative Act," "Cooperative Electrification," "Cooperative Credit," and "Conclusion."

The records show that in the period 1939-53, 65 cooperatives were formed; of these, 26 are reported to have failed, leaving 42 still in existence. There is no explanation of the discrepancy in numbers—65 minus 26 would obviously leave 39 in existence, instead of 42 as listed in the report (Table 2, p. 10). Neither is there an explanation of why only 24 failures are listed in Table 3 (p. 11).

The author explains the failures in terms of general problems of such cooperatives wherever they occur, such as (1) poor management, (2) lack of finances, and (3) unforeseen difficulties. Then he lists three factors as being of local importance in New Mexico: (1) New Mexico has had little experience in consumer cooperation; (2) consumer cooperation is not a significant part of the cultural background of New Mexico; and (3) cooperative wholesalers are distant and can supply only a limited number of items.

It seems to the reviewer that unless private enterprise also is finding it difficult or impossible to provide efficiently the services in the area, there would be no reason for the forming of a cooperative.

The author states that his purpose is to survey the extent of cooperative activity in New Mexico under the Model Act of 1939.

He succeeds in doing a creditable job and the report will be of value to anyone seeking such information. On the other hand, he seems at times to lose his objectivity in his desire to see more cooperatives formed.

VIRLYN A. BOYD.

Department of Agricultural Economics
and Rural Sociology,
Clemson Agricultural College.

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BULLETIN REVIEWS PREPARED FOR THE DECEMBER ISSUE

Unemployment and Partial Employment of Hired Farm Workers in Four Areas: A Summary Report. Bur. Agr. Econ., USDA, and Bur. Employment Security, U. S. Dept. Labor, Washington, D. C. 18 pp. Apr. 1953.

Unemployment and Partial Employment of Hired Farm Workers in Roswell and Artesia, New Mexico, May 1951-May 1952. Bur. Employment Security, U. S. Dept. Labor, and Agr. Res. Serv., USDA, Washington, D. C. 30 pp. Apr. 1954.

Unemployment and Partial Employment of Hired Farm Workers in Selected Areas of Louisiana. Eleanor M. Birch and Joe R. Motheral. Agr. Res. Serv., USDA, and Bur. Employment Security, U. S. Dept. Labor, Washington, D. C. 42 pp. June 1954.

Unemployment and Partial Employment of Hired Farm Workers in Pine Bluff, Arkansas, May, 1952. Lester Rindler and William Mirengoff. Bur. Employment Security, U. S. Dept. Labor, and Agr. Res. Serv., USDA, Washington, D. C. 26 pp. Aug. 1954.

Unemployment and Partial Employment of Hired Farm Workers in Cotton Areas. William H. Metzler. Agr. Res. Serv., USDA, and Bur. Employment Security, U. S. Dept. Labor, Washington, D. C. 40 pp. July 1955.

These five bulletins report a survey of

agricultural labor in selected cotton areas of the South and Southwest.

The disturbing manpower situation occasioned by World War II and the Korean outbreak focused attention and interest on labor problems associated with agriculture. Employment opportunities in rapidly expanding industries left many farmers uncertain about the adequacy of their supply of regular and seasonal labor.

Federal funds were allocated for study purposes to government agencies that have a real responsibility and interest in the changing farm labor situation. Through cooperative research undertakings, rather extensive area studies of farm labor were made. These include surveys of the migrant Atlantic-Coast stream of workers, migratory labor on the High Plains cotton area of Texas, and regular hired labor on dairy farms in Connecticut and sheep ranches in Utah.

In 1952, agencies of the United States Departments of Agriculture and Labor made a survey of employment of hired farm workers in four selected cotton areas. They investigated the employment or partial employment of local nonfarm families, where the head of the family was not a farm operator. These workers, consisting of men, women, and children, constitute a relatively dependable source of seasonal farm labor.

Four areas in the South and Southwest were selected for study. They are Roswell and Artesia, New Mexico; selected areas of Louisiana; Pine Bluff, Arkansas; and Cordele, Georgia. The common and predominant type of agriculture in all these communities is cotton production. Colored labor constitutes the main work force in the areas outside of New Mexico, and Spanish-American workers are the primary source of labor in the New Mexico area.

The information derived from these surveys is of real value to the public and private agencies concerned with farm labor and the formulation of farm labor policies and programs. Certainly the farmers in the communities covered by the surveys will recognize that the information derived has considerable value in helping them interpret the local farm-labor situation and will help them work out more effective relations with agencies that are prepared to assist them in realizing their labor needs.

The bulletins were not written specifically for sociologists, but sociologists will recognize the characteristic social problems that are identified with seasonal employment and low income. Much of the underemployment of these workers is due to so-

cial conditions that could be corrected through modifying existing practices and customs; to this end, the development of effective social organization is a prime requisite.

In the four areas surveyed, 695 households were contacted and information was obtained on 1,259 farm workers. Among the workers over 19 years of age, females were in a majority. The male head of the family who reported part-time employment on farms was employed for the main portion of the year at nonfarm occupations, while the women and youth were employed seasonally, primarily in agriculture. The percentage of male heads of households who considered themselves unemployed for at least a period during the year varied in the four areas, from 20 to 56 per cent. The proportion of male heads of households who reported they were unemployed four weeks or more ranged from 12 to 46 per cent.

The annual earnings of these workers ranged from \$909 per worker in New Mexico to \$359 in Louisiana. For male heads of families, the range was higher; their earnings varied from an average of \$1,256 in New Mexico to \$703 in Louisiana. Approximately a quarter of the seasonal workers indicated they were available for additional local farm work. For females, the proportion was somewhat higher. The reported availability for nonfarm work was even higher than it was for local farm work. It was clear, however, that these local workers were reluctant to leave their places of residence for employment elsewhere. Most willing to leave their local communities were the Spanish-Americans in New Mexico, where 12 per cent of the males reported some interest in obtaining work away from the local community.

In finding their jobs, most workers stated that the employer approached them about employment. Perhaps if these workers were better advised about the possibilities of help to be obtained from agencies, they might be able to extend the number of working days. Also, some general education is needed if these people are to gain the ambition, confidence, and social skills necessary to obtain the positions which are open in agriculture and industry.

With increasing education, there is the prospect that more of the young people will be inclined to look for permanent positions in industry rather than be content with part-time seasonal work. As this situation develops, the farmer may be forced to resort to mechanization on a larger scale and to rely more on migrant help, both

American and foreign. Program planning by farm agencies will need to be designed to maximize the use of the underemployed farm workers and to encourage other potential workers to enter the farm labor force.

WILLIAM A. DEHART.

Department of Sociology,
Utah State Agricultural College.

Membership Relations in Farmers' Purchasing Cooperatives. William S. Folkman. Arkansas Agr. Expt. Sta. Bull. 556, Fayetteville. 40 pp. June 1955.

The purpose of this study was to determine the conditions of membership relations existing in agricultural purchasing cooperatives and to indicate the implications of this condition in determining the effectiveness with which such cooperatives are fulfilling their functions.

Data were obtained by interviews from farmers within the trading area of six purchasing cooperatives which had been in existence for five or more years and whose services were limited to the sale of feed, seed, and fertilizer. The 180 farmers interviewed included a random sample of 60 taken from the membership of the cooperatives and the two nonmember farmers living nearest to each member interviewed. The sample was divided into four groups, based on degree of participation in the cooperative of members, such as attendance at meetings and service as board members. Usable records were secured from 177 farmers grouped as follows: 33 high participating members, 27 low participating members, 33 patrons, and 84 nonmembers who were not patrons. Data secured from the interviews were tabulated and presented for each of the four groups.

The four groups were compared on the basis of certain personal characteristics, their socio-economic status, their participation in other community activities, and their attitudes toward and knowledge about cooperative purchasing organizations.

Although differences between the four groups were not great, for the most part, some were rather significant. The high participating members tended to differ from the other groups in the following characteristics: More of them had a high-school education; they had farmed longer and tended to have the longest record of cooperative membership; they, together with the low participating members, had a higher level of living than did the average patron or nonmember; they were more often operators of moderately large farms and owned their farms; they belonged to

more formal organizations and were active in them; they more frequently held leadership positions in these organizations, and participated more in nonorganized activities.

The study shows that the three aspects of membership relations—participation, attitude, and knowledge—are rather closely interrelated. This was particularly true of participation and attitude.

Specific areas of knowledge and attitudes were examined in detail. A rather small number of highly involved members were well informed and of favorable opinion. Most of the farmers, however, including many members, were woefully uninformed and indifferent regarding the operation of the cooperatives. On the other hand, most of the complaints against board members and employees, as well as criticisms of prices and financial policies, came from the high participating members.

The study fulfills its stated purpose and the conclusions are well substantiated. The study is well organized, and the report clearly outlined and well written. It holds the interest of the reader to the end.

E. A. WILLSON.

Department of Agricultural Economics
and Rural Sociology,
Montana State College.

Louisville Surveys Its Needs: A Report to the Citizens of Louisville, Mississippi. Alex Fanelli and William Buchanan. Social Science Research Center, Community Series 2, State College, Miss. 21 pp. Apr. 1954.

Recreation in Louisville: A Report to the Citizens of Louisville, Mississippi. William Buchanan and Alex Fanelli. Social Science Research Center, Community Series 3, State College, Miss. 25 pp. May 1954.

Needs and Problems of Mississippi Communities. Alex Fanelli. Social Science Research Center, Community Series 5, State College, Miss. 33 pp. Mar. 1955.

Toward a Delineation of Community Research. Harold F. Kaufman, Willis A. Sutton, Jr., Frank D. Alexander, and Allen D. Edwards. Social Science Research Center, Community Series 4, State College, Miss. 56 pp. May 1954.

The first of the above reports is the second in a series on community research, published by the Social Science Research Center of Mississippi State College. This report is based on data collected in a survey to "find out how a representative Mis-

Mississippi town goes about meeting its needs." Oriented toward the citizens of Louisville, it represents an attempt to report "useful" information on "the town in general—what the people think about it, how satisfied or dissatisfied they are with its facilities, and what they see as the community's major problems."

The locale for this study is a city of 5,300 population, 43 per cent of which is Negro. Since the sample consisted of 318 white adults (age 21 and over), it is essentially a report on the expressed needs and reactions of the dominant white population. In this respect, it would be both interesting and informative to parallel the findings for the Negro group.

Addressed as it is to the lay population, the report has few footnotes and none of the usual professional references relative to levels of statistical significance, or other lengthy, qualifying comments. The authors have done a very creditable job of reporting in a relatively simple and concise manner. The use of numerous charts, and an otherwise interesting format, help to make the report a very "readable" one.

The second report, Community Series 3, is concerned with what appears to be the "number one social problem" in Louisville—as reported in Community Series 2. As indicated by the authors, this is not a "problem-solving" report in the usual sense. Rather, it presents certain kinds of information which should be helpful to the people of Louisville in working out their own solutions to the problem of recreation. The report (1) compares Louisville with other towns of its size in respect to recreational facilities; (2) indicates some of the experiences of other communities in implementing recreation programs; (3) provides information on Louisville's efforts along recreational lines in the past; and (4) presents some of the views and opinions of 34 adults who rated recreation as a major need.

The report listed as Community Series 5 "deals with the needs of Mississippi cities, towns, and rural communities as these needs are seen by the leaders in these localities." Like the two reviewed above, this report is one addressed to a lay population. To the reviewer, it not only represents a commendable effort to provide "practical" information for use by a lay audience, but it also succeeds in purveying this information in a manner which is in keeping with the audience.

Based on the opinions and reactions of 890 community leaders from all over Mis-

issippi, the bulletin suggests some of the major problems confronting Mississippi communities. It also indicates those agencies and groups which the community leaders identified as mainly responsible for initiating action to meet certain crucial needs. Despite some variations in the identification of major needs in communities of varying size, "industrial development" and "better schools" were matters of major concern generally.

Community Series 4 is written for the professional audience and represents a "work paper" of four members of an informal group, called the Southern Committee on Community Study. As stated by the authors, it is intended to be a "highly tentative and somewhat specialized" attempt at a "delineation of fields of community research." In this connection, the report places considerable emphasis on research in the area of "community dynamics." It also proposes "(1) to note some of the demands made by action programs on community research, (2) to indicate the nature of studies which have been designated as community research, and (3) to attempt a listing and classification of such research conducted in the South."

The report is initiated with a brief consideration of the concept of community, wherein the authors recognize that adequate definition must await further research. After briefly reviewing trends in community research, they delineate three analytical components of community: "the ecological, the structural, and the action-interactional." The latter is the area of major concern in this report.

In discussing research on community structure, the authors suggest that a "configurational" analysis is essential. They identify several areas in the realm of structure which either have received or should receive considerable emphasis, referring particularly to three types of association of significance to modern community analysis: formal organization, informal association, and kinship groupings.

The authors concern themselves with some of the admittedly numerous problems, both in theory and methodology, associated with the "action" approach. The problems of identification of the goals of any action, as well as those in determining the sequence of events involved, are recognized as particularly troublesome. The "phases of the action process" are critically examined, with some reference to recent studies in the "action" field. The authors present an analytical framework on these

"phases of action"—one which is now being tested in several communities.

This exploratory section of the report is concluded with a definition of the community "at an interactional level." The "community may be seen as a system of interrelated associations, formal and informal, whose major function is policy making and execution for the local society—the orientation and carrying out of local actions."

Another section of this report deals with the status, nature, and development of local improvement programs, with particular reference to the South. Likened to a social movement of considerable proportions, the authors recognize the widespread development of community improvement programs as an "unprecedented opportunity for researches in community action processes." Several important problem areas are delineated.

The report concludes with "some observations on southern community studies," and a classified listing of 344 selected studies. Many of the studies are listed with brief annotations. Somewhat surprising was the relative paucity of community studies in the area of migration and mobility. With increased rural-to-urban migration resulting from recent developments in the South, the opportunities for and desirability of such research would seem evident.

This report represents a great deal of thinking and effort on the part of the authors. Admittedly exploratory in what the reviewer considers as one of its major contributions, it should be read and debated by all those interested in this important area of sociological research.

WARD F. PORTER.

Federal Extension Service,
U. S. Department of Agriculture.

Youth in the Suburb. Christopher Sower. Social Research Service, Dept. of Sociology and Anthropology, Michigan State College, East Lansing. 42 pp. June 1954.

There remains much to be learned about the social and psychological characteristics of America's rapidly expanding suburban population. This bulletin reports findings of a survey among the 1,011 seventh- and eleventh-grade students of the schools (ten in number) "in the suburbs surrounding the rapidly growing industrial city of Flint, Michigan." The data consist of responses to a 73-item questionnaire designed to investigate four areas of the in-

formants' lives: their interests, problems, clique relations, and participation in formal organizations.

The findings show the boys interested first in athletics, hunting, fishing, and swimming; and secondarily in certain skills necessary to living in a mechanical world. Among the girls, only 12 per cent indicated interest in homemaking as such, but more expressed interest in learning food preparation and child care. Even more expressed interest in dressing smartly and listening to the radio.

These students' participation in formal social organizations is high, and there is an absence of the social-class-oriented variations in associational activities reported in other studies. The former may be a consequence of exceptional efforts by the communities' leaders, as much as of the suburban character of the students' residence, since the area was chosen for study because of "considerable success" by the Extension Service in organizing social activities in these communities.

The author expresses much concern over the finding (which corroborates previously reported research) that youths' vocational goals tend to outdistance foreseeable opportunities. Although some students indicated concern with school problems and with child-parent relations, far more frequently they mentioned the problem of vocational choice.

Informal associational patterns were delineated via a series of sociograms. Clique group participation reflected the same disregard for social class as mentioned relative to formal participation. The individual cliques tended toward residential and class heterogeneity. An inverse association between clique participation and mobility, and a direct association between such participation and membership in formal organizations, are reported.

The data are interpreted as having several implications for suburban social action: (1) Schools and communities need more adequately to furnish their young people with the facts of occupational and social living; (2) teen-age young people should be given more opportunities to accept adult responsibilities, thus expressing their parental emancipation in socially accepted ways; (3) community organizations should continue deemphasis of social class loyalties.

The report presents in lucid form a description of several important aspects of seventh- and eleventh-graders' lives in the suburbs of Flint. It fails to consider the degree to which these findings may apply

to other than the two grades studied, or to teen-agers in other suburbs, although the reader is left with the impression that the findings are meant to apply to at least all teen-age youth in the area. Any extensive generalization of the findings to other than the survey area must await information not available in the report. The reviewer recommends the study to students of suburban living and to community leaders as a careful survey of selected aspects of a limited population.

MARVIN J. TAVES.

Department of Sociology,
University of Minnesota.

Population Change and Net Migration in the North Central States, 1940-50. Paul J. Jehlik and Ray E. Wakeley. North Central Regional Publication No. 56 and Iowa Agr. Expt. Sta. Res. Bull. 450, Ames. 66 pp. July 1955.

This publication is one in the continuing series of the North Central Regional Committee for Research on Population Dynamics and Related Rural Social and Economic Problems. It seems fitting in view of the sponsorship of this publication to take note of the many fine studies which have been done by the various regional committees sponsored and subsidized by the Farm Foundation, the various state agricultural experiment stations, the Agricultural Research Service of the USDA, and others. The regional committees are responsible for an increasingly important segment of the research being done in rural sociology and agricultural economics in this country. There is no doubt that the regional approach to research is much more realistic in many instances than the state approach.

The worth of the present study lies in the pertinency of its subject and in the scholarly way in which it was executed. Its major aim is a description and analysis of significant population changes and of the components of population change from 1940-50 in what is called the North Central Region. The states included in the region are Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, and Kentucky.

The computation of migration was accomplished through the residual method (described in detail by Jehlik and Wakeley), and through the use of special tabulations of unpublished data supplied by the National Office of Vital Statistics. Careful adjustments were made in the data for differences in census definitions and for underregistration. A wealth of graphic and

tabular materials is used to document the findings.

Jehlik and Wakeley set the stage for their research findings by describing migration as a dynamic social fact. They point out that the motivations leading to migration are many and complex, and that present-day migration streams are multi-directional as well as specialized movements. They feel that the need for migration information is found especially in the competition for manpower between industry and agriculture.

The more important conclusions of the study may be briefly summarized as follows: (1) Although the North Central States had a history of continuous population growth, net migration out of the region lowered the natural increase of the region from 12 per cent to 10 per cent during the 1940-50 decade. (2) The urban population of the region increased by 13 per cent, whereas the rural population increased only by 7 per cent. The rural population in the metropolitan state economic areas experienced a phenomenal increase, whereas the rural population in nonmetropolitan state economic areas experienced a decrease. (3) Both migration and natural increase are playing important roles in the redistribution of the population of the region. The former is more important in the nonmetropolitan and rural areas, while the latter is more important in metropolitan and urban areas. (4) The North Central Region's population will continue to grow, but its proportionate share of the national population will decline in the future.

An additional significant finding is given a different slant by the authors. Heretofore, researchers have associated redistribution of the population—along with a decline in number of farms, a decline in the amount spent for hired labor, an increase in total value of farm products, and an increase in level of living—causally with the mechanization of agriculture. Jehlik and Wakeley go only so far as to say that these changes (including a phenomenal increase in tractors) were concurrent with the redistribution of population and do not single out motivating forces.

In conclusion, it may be stated that demographers, rural sociologists, and agricultural economists—whether they be in teaching, research, or extension—will find much use for this study. Clearly, it extends the frontiers of migration and population research one step further.

ALVIN L. BERTRAND.

Departments of Sociology and Rural Sociology,
Louisiana State University.

Mississippi's People, 1950. Morton B. King, Jr., Harald A. Pedersen, and John W. Burrus. Sociological Study Series No. 5. Bur. of Public Admin., Univ. of Miss., University. 95 pp. 1955.

This report is a product of the commendable increase in population and sociological research under way for several years in Mississippi. The bulletin is a cooperative venture, each of the authors representing a different educational institution. The style of this bulletin, avowedly popular, is directed toward interested citizens or high-school students. But the authors cater to the demographer with many tables and a statistical appendix. Research principles are in no sense compromised through popular treatment of material. Major topics covered are fertility, mortality, migration, population composition, and Mississippi's demographic future.

The level of the authors' methodological sophistication is generally higher than that found in many state population bulletins. Particularly attractive are mortality rates by urban-rural residence and color, and 1940-50 net migration estimates for each state economic area by age, sex, and color. The reviewer, however, would criticize the authors' use of ratios of children to women (fertility ratios), unstandardized for age of women and unadjusted for census undercounts of young children. Standardization would change considerably many of the fertility differentials shown in time series or by residence and color. Estimates of the extent of census undercounting are not easy to come by, but those that are available indicate that cases where Negro fertility ratios are lower than white ratios—and the authors point to several—are often just instances of poorer enumeration and age reporting among Negroes.

The estimates of net migration from 1940-50 by age, and of death rates by age, would have been improved if census age counts around ages 65-69 had been smoothed. There is gross overreporting of population at ages 65-69, especially among women and Negroes. Consequently, death rates at this age, based on unsmoothed population-base data, are abnormally low, and there is an apparent migration of people at this age group into many areas of the state which is mostly spurious.

With respect to future Mississippi population trends, King, Pedersen, and Burrus look for continued net outmigration and a relatively stationary total population. They are candid enough to suggest that wages, working conditions, educational facilities, and race relations in the state do not com-

pare well with those in some other states and thus serve to encourage outmigration. They see "... a general atmosphere of complacency and conservatism, a scarcity of intellectual interests and cultural opportunities, and a lack of satisfactory recreational facilities" as conditions in rural life which motivate young people cityward.

CALVIN L. BEALE.

Agricultural Marketing Service,
U. S. Department of Agriculture.

Farm Family Housing Needs and Preferences in Nebraska. Virginia Y. Trotter and Margaret I. Liston. Nebraska Agr. Expt. Sta. Res. Bull. 175, Lincoln. 122 pp. June 1954.

This study had a three-fold purpose: (1) to interpret the housing needs of farm families of the state of Nebraska in terms of the characteristics of the dwellings, nature of household activities, family preferences, and storage space requirements; (2) to determine the difference in needs and preferences of farm families living in different parts of the state; and (3) to compare these needs and preferences with those of families in the North Central Region as a whole.

This report is similar to the study for the North Central Region, *Farm Family Housing Needs and Preferences in the North Central Region*, published in 1951. The regional report is, in turn, similar to reports issued in three other regions of the nation—the Northeast, the South, and the West. The abundance of this type of data is due to the fact that under the Research and Marketing Act of 1946, administered through the U. S. Department of Agriculture, the four regions and several states were provided with research funds to undertake this kind of study.

An excellent statistical sample, drawn by the Statistical Laboratory at Iowa State College, was used. A total of approximately 560 farm families supplemented the households in Nebraska included in the regional study.

Some of the general farm family needs and preferences in the state included the following: there was a common desire for houses with five, six, or seven rooms (85 per cent of all families); for one-story houses (80 per cent); and for houses with a sloping roof (95 per cent), basement or cellar (90 per cent), central heating system (85 per cent), and one or more porches (85 per cent). Like the other reports, this one contains detailed information concerning household activities such as food preparation and meal service, food preservation, laundering, sewing, leisure and play,

and so on. It also provides statistics on the percentage of families having certain items of modern equipment and other modern facilities.

The needs and preferences of families in the northeast and south-central areas of the state varied only slightly from those for families in the state as a whole. More families in the north-central area lacked electricity and such space as a basement.

There was a similarity of many family characteristics between the state and the region, but more families in Nebraska than in the region had family incomes above \$3,000, were cash grain or livestock farmers, and rented the farm they were operating. The analysis also contains some breakdowns showing the variation in household facilities and family possessions and preferences by family income, family composition, and farm tenure.

One of the limitations of the report is the fact that the field work was undertaken in 1948 and 1949. If Nebraska is one of the states that has kept pace with many other rural areas in remodeling and repair work, and undoubtedly it is, there is considerable likelihood that major changes have taken place in the farm housing situation since the date of the study. Prosperity among farm families during the intervening period probably has resulted not only in considerable structural and planning improvement but also in the addition of many new items of household equipment.

Nevertheless, this small booklet contains a massive statistical inventory of farm housing conditions and desires in the state of Nebraska, for the immediate postwar period. This should provide very helpful information in the planning of new—and the replanning of old—farm houses in the state. The data obtained in the field survey were handled well in the report.

GLENN H. BEYER.

Housing Research Center,
Cornell University.

Stimulating Corrective Health Action Following School Health Examination. William G. Mather, Lauris B. Whitman, Mary E. Ayers, and A'Delbert P. Samson. Pennsylvania Agr. Expt. Sta. Bull. 588, State College. 14 pp. Dec. 1954.

Family Factors Influencing Corrective Action Following School Health Examination. Same authors. Pennsylvania Agr. Expt. Sta. Bull. 589, State College. 27 pp. Mar. 1955.

These two bulletins report the results of

an experiment carried on in some twenty schools in the state of Pennsylvania. Aided by a grant from the Health Information Foundation, the experiment was designed to increase the number (and percentage) of children who actually received medical or dental care after the routine school health examinations indicated their need for such care.

The first bulletin (No. 588) describes briefly the experiment itself, indicates the methodology used, and summarizes the results. Basically, the experiment consisted of the development of a comprehensive record card and its use by the public health nurse in interviewing the parents after a certain lapse of time following the pupil's examination. The sample consisted of 15 widely scattered elementary schools in which the experimental techniques were used, and a "control" group of 5 schools in which there was no change in method. It was found that ninety days after the health examination 61 per cent of the parents of defective children in the fifteen schools had initiated some corrective medical action as against only 46 per cent in the "control" group. Inexplicably, there was no improvement in the rate of corrective dental action.

The second report (No. 589), based on the same survey data, discusses the economic and social factors which were found to encourage or retard the parents in bringing about the desired corrective action.

Seventeen tables and fifteen figures are well geared into the text and tell the story graphically. The parents who are more likely to initiate some corrective action are those who were aware of the defect before the examination, are urban rather than rural, have incomes of over \$2,000, have better than high-school education, have two or more children, and are active in P.T.A.

The project and its resulting reports are a good illustration of what has come to be called "applied sociology." A public agency had a problem which it did not feel competent to solve. It turned to another public agency with qualified personnel, which in turn collaborated with a private foundation devoted to the dissemination of information about social and economic problems of medical care. Together with citizens' committees and school officials at all levels they formulated the project, carried out the survey, analyzed the results, and have come up with the answers and recommendations now being disseminated in these two well-written reports. Parents, teachers, nurses, and school administrators

will be the gainers from this very excellent job.

RALPH R. NICHOLS.

Agricultural Marketing Service,
U. S. Department of Agriculture.

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NEWS NOTES AND ANNOUNCEMENTS

Edited by Samuel W. Blizzard

NEWS PREPARED FOR THE SEPTEMBER ISSUE

COLLEGES AND UNIVERSITIES

University of Florida. T. Lynn Smith, professor of sociology, spent part of the summer of 1955 doing field work in Ecuador and Colombia. This is a part of a five-year study, "Colonization and Settlement on the Eastern Slope of the Andes," in which he is engaged under the provisions of a grant from the John Simon Guggenheim Memorial Foundation.

Orlando Falls Borda, of Bogota and Barranquilla, Colombia, who received the Ph.D. in sociology from the university in June, has been appointed as assistant director of the Servicio Tecnico Agricola Colombiano-Americano (the Point Four Program) in Colombia. He did his work at the University of Florida under the provisions of a fellowship from the John Simon Guggenheim Memorial Foundation; his doctoral dissertation is entitled "A Sociological Study of the Relationships of Man to the Land in the Department of Boyaca, Colombia."

John Van Dyke Saunders, a candidate for the Ph.D. degree in sociology, has accepted a position as assistant professor of rural sociology at Mississippi State College. His dissertation is entitled "A Study of Differential Fertility in Brazil."

Michigan State University. As part of the university's centennial program, the School of Science and Arts held a symposium, "The New View of Man: A Synthesis and a Forecast," May 16 to 20. Talcott Parsons, Harvard University, gave the principal lecture at the section of the symposium sponsored by the Division of Social Science. Parsons also conducted an informal seminar for members of the social science departments.

A chapter of Alpha Kappa Delta was established at the university on April 11, 1955. Everett C. Hughes, University of Chicago, gave the address at the initiation ceremonies.

The Agricultural Marketing Service, USDA, has made a grant of \$20,000 to the Department of Sociology and Anthropology for a study of the social factors affecting the decision making of farmers in the marketing of agricultural products.

The Michigan State Board of Alcoholism has granted the Social Research Service a sum of \$12,500 to study the social factors

associated with drinking and nondrinking among high-school students.

Edward Moe was appointed professor of sociology and anthropology (Extension and Research), effective July 12, 1955.

J. C. McKinney was on sabbatical leave last spring quarter. He collaborated with Howard Becker (University of Wisconsin) on a book entitled, *Constructive Typology: Theory and Application*.

William Form has returned from his sabbatical leave, a part of which was spent studying in Mexico. Kenneth E. Tiedke returned, April 1, from a 16-month leave, which was spent in Cuba working under contract between the Inter-American Institute of Agricultural Sciences and Michigan State University.

Paul A. Miller, formerly professor of sociology and anthropology, was appointed director of the Agricultural Extension Service, April 1, 1955. His place in the department as leader of rural sociological and anthropological extension has been taken by Glen L. Taggart.

Christopher Sower is spending his sabbatical leave in Ceylon on a Fulbright grant. He will be associated with the University of Ceylon and working as a member of a research team which is conducting an evaluation study of the Rural Development Program, sponsored by the government of Ceylon.

Joe D. Mills is working this year in Austria on a Fulbright grant.

Olen Leonard has been granted an additional year's leave to continue as leader in the Northern Zone of the program sponsored by the Inter-American Institute of Agricultural Sciences, under contract with Michigan State University.

Donald F. Rieder is spending the current year doing research on the U.S.A.-Mexican border, through a grant to the Area Research Center from the Carnegie Corporation. He will be located in Sonora, Mexico.

Roy A. Clifford transferred last July from the "Border" project, where he directed the Rio Grande Disaster Study (with headquarters at Austin, Texas), to Havana, Cuba, to assist Olen Leonard in the program of the Northern Zone of the Inter-American Institute of Agricultural Sciences.

John Useem has been appointed an advisor on research to the Committee on International Exchange of Persons, of the

Conference Board of the Associated Research Councils.

Glen L. Taggart was named to succeed John Useem as departmental representative on the six-department seminar in cooperation with the American Universities Field Staff.

A Sociology of Education, by W. B. Brookover, was published last spring by the American Book Company. J. F. Thaden and Orden Smucker contributed a chapter to this book.

The following promotions became effective, July 1, 1955: Duane L. Gibson, to professor; John C. McKinney, to associate professor; Joel Smith and Joe D. Mills, to assistant professor.

Two grants totaling \$5,100 were received from the National Academy of Sciences-National Research Council (Committee on Disaster Studies) to study the human aspects of the tornado disaster in Flint, Michigan, and the flood disaster along the Rio Grande River. On the Flint study the following were active: W. H. Form, G. P. Stone, C. M. Westie, Sigmund Nosow, and C. P. Loomis. Those working on the Rio Grande study were: C. P. Loomis, W. H. Form, R. A. Clifford, Arturo De Hoyos, and William D'Antonio, all from Michigan State University; and Harry Moore, from the University of Texas.

University of North Carolina. Gordon W. Blackwell, recently promoted to a Kenan professorship in sociology, delivered a series of lectures at the Conference on American Studies at Oxford University, England, from July 12 to August 13. Blackwell was one of eight American scholars making the trip under a Fulbright award. His general area was American Social Institutions. He also lectured at the Cambridge Institute of Education at Selwyn College, Cambridge University, August 9-19. The theme of the Institute was "The Child and the Changing World." Blackwell's topic dealt with the social scene in America, with particular reference to the impact of current trends on the growing child.

Lee M. Brooks, who taught during the spring semester at the University of Hawaii, is teaching this year at Whittier College, Whittier, California.

Joffre Coe was made director of the Roanoke Rapids Basin Archaeological Survey, a joint project between the Virginia Power and Light Company and the University of North Carolina, financed by the former. University assistants on the project are Stanley South and Lewis Spinford.

John Gillin has returned to the department from a year at the Center for Ad-

vanced Study in the Behavioral Sciences, at Stanford University.

Harriet Herring has finished her assignment as a member of the late Governor Umstead's Committee on Reorganization of State Government and has accepted a new appointment on Governor Hodges' Committee on State Income.

Reuben Hill spent the summer on the staff of the Social Science Research Center of the University of Puerto Rico completing the analysis of the verification stage of the Family and Fertility Project. He is associated in this project with Kurt Back and J. Mayone Stycos. In July, the Family Project in Puerto Rico undertook the study of Changing Family Practices and Their Personality Products, with Howard Stanton of the University of Puerto Rico in residence as assistant director working under the general supervision of Hill.

Following up research begun in 1947-48, John J. Honigmann spent the summer studying the Cree Indians of Attawapiskat, Ontario. Emphasis was on collecting personality, child-rearing, and later-socialization data. Cooperating in the research were Hans Hoffman, Elizabeth Hoffman, and Irma Honigmann. The project was financed by the Wenner-Gren Foundation for Anthropological Research.

Harold D. Meyer is director of a study of Recreation for the Aging in North Carolina, financed by the insurance companies located in North Carolina. He is being assisted by S. H. Hobbs, Jr. and Al Norman. Meyer is also director of the new curriculum leading to a Master of Science degree in Recreation Administration.

Douglas Sessoms has joined the department as an instructor in the Recreation Administration curriculum.

George L. Simpson, Jr. has been granted a Guggenheim Foundation Fellowship to complete *Mid-Century South: The New Southern Regions of the United States*, a book begun by the late Howard W. Odum. Simpson will be assisted by Katharine Jocher and Marjorie Tallant.

E. A. T. Barth and Robert Garren, part-time instructors in the department last year, have begun their duties at the University of Washington and Alabama Polytechnic Institute, respectively, each at the rank of assistant professor.

William L. Kolb, of Tulane University, and Manfred H. Kuhn, of the State University of Iowa, were visiting professors during the first term of summer school.

A Small-Groups Research Laboratory has been built adjacent to the departmental library.

The University of Wisconsin. The National Agricultural Extension Center for Advanced Study, supported by a Kellogg Foundation grant of \$1,239,000 has been established at the College of Agriculture. Funds from the grant will be used over the seven years, from 1955 through 1961, for advanced training in agricultural extension education. The proposal for the program began at the 1952 meeting of the Land-Grant College Association. The center is expected to attack four problem areas which extension workers in all of the nation's 48 states helped to outline. They include:

1. The urgent need for an effective, more standardized program of extension personnel training and management.
2. The need for a more systematic dynamic approach to the problem of extension program planning, execution, and evaluation.
3. The improvement of organizational relationships of extension services, both external and internal.
4. The lack of a complete up-to-date evaluation and assessment of the functions and responsibilities of the Cooperative Extension Service.

Initial efforts of the center will be in personnel training and management, in extension program planning, and in organizational relationships. There will be academic training, short courses, workshops, conferences, and research at the center itself; pilot studies and demonstrations elsewhere; and a system developed for making the findings of the center available throughout the agricultural extension field.

The plan of Kellogg Foundation support calls for declining aid through the seven years until the cooperating institutions take over full support in the eighth year. Co-operating in the project, besides the Kellogg Foundation and the University of Wisconsin, are the Land-Grant College Association, the 51 extension services throughout the country, and the federal extension office.

Eugene A. Wilkening has been selected chairman of the Department of Rural Sociology to succeed Douglas Marshall, who is devoting full time to teaching and to state and regional population studies. Marshall has recently published *How Wisconsin's Population Is Changing*, a comprehensive graphic picture of trends in the state.

Peter Munch, of the University of North Dakota, was visiting professor in the Department of Rural Sociology and the Department of Scandinavian Studies for the 1955 summer session.

Frederick Fliegel, who recently com-

pleted his Ph.D. degree, has accepted an appointment as assistant professor of rural sociology at Pennsylvania State University. Thompson Peter Omari, who also received his Ph.D. in June, will return to the Gold Coast to teach at the University College of the Gold Coast.

The department is sponsoring a short course for professional leaders in rural areas at the university, in November, 1955. The central theme this year will be "Social Change as It Affects Rural Community Life."

A. F. Wileden was elected vice-president of the American Country Life Association at the annual conference, held at Pennsylvania State University.

Virginia Polytechnic Institute. E. L. Kirkpatrick, of Marietta College, was a recreation specialist on the Blacksburg staff for two months during the summer.

CONFERENCES AND ASSOCIATIONS

American Anthropological Association. The fifty-fourth annual meeting of the association will be held in the Sheraton Plaza Hotel, Boston, November 17-19, 1955. The program chairman is Evon Z. Vogt, Harvard University, 9 Bow Street, Cambridge 38, Massachusetts.

Eastern Sociological Society. The twenty-fifth anniversary meeting was held in New York City, April 2 and 3. To celebrate this occasion, the first five presidents—Harold A. Phelps, Frank H. Hankins, Henry P. Fairchild, Manuel C. Elmer, Robert M. MacIver, and James H. S. Bossard—addressed the annual dinner with informal remarks on "Sociology Since 1930." "The Clinical Study of Society" was President Alfred McClung Lee's address to the society.

Newly elected officers of the society are: president, Mirra Komarovsky; vice-president, Charles H. Page; representative to the Council of the American Sociological Society, Alfred McClung Lee; members of the Executive Committee, Theodore Abel and Ruby Jo Reeves Kennedy. Leo W. Simmons has been appointed to fill a vacancy on the Executive Committee.

The 1956 annual meeting will be held in New York City, March 24-25. Papers for the program, limited to about fifteen minutes of oral presentation, will be accepted for consideration on any topic of interest to sociologists: theory, research methods, and analyses of empirical data. The title of one or more alternative sections which the author believes appropriate for scheduling his paper should be indicated clearly on the

manuscript. Papers should be sent to the chairman of the Papers Committee: W. C. Waterman, Department of Sociology and Anthropology, Brooklyn College, Brooklyn 10, New York. The deadline for receiving these papers is January 1, 1956.

Ohio Valley Sociological Society. The 1955 annual meeting of the society was held at Fenn College, Cleveland, Ohio, April 29-30. Brewton Berry, president, presented as his address, "The Refugee—Symbol of the Twentieth Century." Donald Young, president of the American Sociological Society, spoke informally on "Bridging Social Science and Social Practice." Newly elected officers of the society are: M. C. Elmer, University of Pittsburgh, president; Frank C. Hartung, Wayne University, vice-president; Gerald R. Leslie, Purdue University, secretary-treasurer; Raymond F. Sletto, Ohio State University, representative on Council of American Sociological Society; and Christen T. Jonassen, Ohio State University, editor of the *Ohio Valley Sociologist*. The 1956 annual meeting of the society will be held at the University of Pittsburgh.

FELLOWSHIPS, GRANTS, AND AWARDS

Social Science Research Council. The following types of fellowships, grants, and other appointments for research or study will be offered in 1956 by the council:

Research Training Fellowships, predoctoral and postdoctoral, for "more advanced research training than that which is provided in the usual Ph.D. program." All Ph.D. requirements except the thesis must be met before tenure of fellowship may begin, but application need not be deferred until that point has been reached.

Faculty Research Fellowships, providing half-time support for research for three-year terms. Open to college and university social science teachers, normally not over 35 years of age.

Grants-in-Aid of Research, to aid scholars of established competence in meeting direct expenses of their own research projects. Not open to candidates for degrees.

Undergraduate Research Stipends, open only to college juniors, for supervised research during the summer and the ensuing senior year. Some appointees will be granted first-year graduate study fellowships for the next year.

The foregoing awards are open to students or scholars in virtually all areas of social science; the council will also offer

special fellowships and grants for work in certain designated fields:

Political Theory and Legal Philosophy. Predoctoral and early postdoctoral fellowships for preparation for advanced research.

History of American Military Policy. Grants to mature scholars to support research on this nation's military policies and impinging factors, covering any period between 1750 and 1939 except that of the Civil War.

Slavic and East European Studies. Under the auspices of the Joint Committee on Slavic Studies, established by the American Council of Learned Societies, and the Social Sciences Research Council, grants will be offered by the latter council for research, publication, and conferences which relate to research in this field.

In addition to awards to individuals, the council plans to sponsor Summer Research Training Institutes, of about eight weeks' duration, in the following fields and possibly on one or more others, if suitable arrangements can be completed: Quantitative Research Methods in Agricultural Economics, Survey Methods in Research on Health Problems, Population Studies. These institutes are designed to introduce active research workers at the postdoctoral or equivalent level to new methods or bodies of knowledge not generally available in regular academic curricula.

The Institutes in Mathematics for Social Scientists, held in 1955, will not be repeated in 1956.

Interuniversity Summer Research Seminars will be supported on the basis described in Social Science Research Council *Items*, March, 1954, pp. 4-6.

A circular describing all of these programs in more detail will be available after October 1, 1955, from the Washington office of the Council, 726 Jackson Place, N.W., Washington 6, D. C. The circular will indicate the closing dates for acceptance of applications, which should be carefully noted as most awards are made at only one time in each year.

PRIVATE AGENCIES

Mexico City Community Hostel. This center, operated by Robert C. Jones, is available to visitors for the general purpose of bringing together persons interested in knowing the country better, especially the rural areas and community life. Intercultural and interlingual activities are a feature of the project, as well as study groups

on community development and group processes.

GOVERNMENT AGENCIES

The International Labour Organization. The 1956 conference of the organization will discuss the problem of farm families migrating to cities in search of employment.

Department of Community Development, the Gold Coast. The Rural Sociological Society's first member in the Gold Coast, W. Halm Koomson, reports the following developments, in a letter addressed to the society's president-elect:

As you must know, the Gold Coast, a small country among the British Colonies, is fast heading towards the attainment of its independence. This aspiration has prompted our Government to pay attention to extension services in the rural areas in particular, hence the creation of this Department of Community Development and Social Welfare. We call it over here "Mass Education." The Government is trying to give our rural communities the vision of a better way of life and we officers, working under unhealthy village conditions, teach village leaders the techniques which make this vision of a better way of life possible. It may interest you to learn that last year our Mass Education Teams embarked on a national campaign on "Pay your way and improve your Local Council area." The results were very encouraging. As a result of our successes, this year the Department of Agriculture has also asked us to undertake a similar campaign on "Cocoa Agronomy."

Department of Labor, Commonwealth of Puerto Rico. The Commonwealth of Puerto Rico has agreed to lend to Jamaica the services of Clarence Senior, chief of the Migration Division of the department, for a survey of Jamaican migration to Great Britain. Senior will spend two months in a field survey, and return to Jamaica to work out a suggested program. The study will be administered by the Institute of Social and Economic Research of the University College of the West Indies, which will choose a Jamaican scholar as a research associate for the survey.

NEWS NOTES AND ANNOUNCEMENTS PREPARED FOR THE DECEMBER ISSUE

ANNUAL MEETING OF THE RURAL SOCIOLOGICAL SOCIETY

Minutes of the Business Meeting, August 29, 1955, University of Maryland, College Park, Maryland. The meeting was called

to order at 4:15 p. m. by William H. Sewell, president. Dean Cotterman, dean of the faculty of the University of Maryland, welcomed the Rural Sociological Society to the Maryland campus. Minutes of the meeting, September 7, 1953, published in *Rural Sociology* (XIX:4, December, 1954, pages 420-432), were accepted as printed.

The present and past secretary-treasurers presented the treasurer's report for the year ending August 18, 1955. Copies of these reports are included as part of the minutes of this meeting. The reports were received by a motion duly seconded and passed.

The report of the Auditing Committee was presented by Harold Capener, chairman. By motion duly seconded and passed, the report was received. A copy is included in the minutes.

The secretary-treasurer reported for the Membership Committee in the absence of its chairman, John C. Belcher. There were 575 members, including 89 student and 485 active professional or joint members at the time of the business meeting. The membership chairman distributed 1,500 printed invitations to membership to prospective members during the year. This is largely responsible for the increase in the total membership.

The report of the Board of Editors of *Rural Sociology* was made by Harold Hoff-sommer, chairman. The question of sponsorship of the journal was raised. The journal has been sponsored by the University of Kentucky since January, 1952. The meeting was reminded of the policy of passing around the sponsorship of the journal, and the Board of Editors expressed its willingness to accept applications for sponsorship from other institutions. Howard Beers stated the position of the current sponsor, the University of Kentucky. They are not desirous of monopolizing the journal, nor are they anxious "to dump" it, but merely wished to remind the society that another five-year period will end on January 1, 1957. Therefore, if sponsorship of the journal is to be changed at the end of the five-year period, action should be taken now.

It was moved, seconded, and passed that the membership of the society be advised that April 1, 1956, will be the deadline for expressing and filing with the president of the society their interest in sponsoring the journal, *Rural Sociology*.

The managing editor of *Rural Sociology*, A. Lee Coleman, reported orally on the journal during the current year. Following previous custom, a formal report will be prepared at the close of the calendar year.

The Executive Committee reported a request from the Board of Editors of *Rural Sociology* that the society consider the desirability of publishing an accumulative index of articles of the first twenty volumes of *Rural Sociology*. The Executive Committee recommended that the society authorize the Board of Editors to proceed with the arrangements to prepare and publish such an index, all arrangements including financial arrangements to be subject to the approval of the Executive Committee. By motion duly seconded and carried, the Board of Editors was authorized to proceed on the basis of the Executive Committee recommendation.

The Executive Committee recommended that the society authorize the charging of a registration fee of \$1.00 per registrant at the annual meeting of the society and that the treasurer be authorized to make available in advance to the Local Arrangements Committee for the 1956 meeting the sum of \$100 to use in meeting certain expenses in arranging for the meetings. It was further recommended that the treasurer pay to the Local Arrangements Committee at the University of Maryland the sum of \$100 for use in meeting certain expenses in arranging for the 1955 annual meeting. By motion duly seconded and carried, the recommendations of the Executive Committee were approved and the treasurer was authorized to make the necessary payments.

The report of the Special Committee on Classes of Membership was made by Charles E. Lively, who reported for Olaf F. Larson, the chairman. The proposed amendments to the constitution and bylaws were read and explained. By motion duly seconded and carried, the proposed amendments to Article I of the bylaws of the society were adopted. The amendments, as adopted, are in the 1955 report of the Classes of Membership Committee, previously published in *Rural Sociology* (XX: 2, June, 1955, pages 195-196).

The report of the Special Committee to Establish a Repository for the Records and Other Historical Material of the Rural Sociological Society was made by Charles E. Lively, chairman. He reported that a sat-

isfactory agreement with the University of Missouri library had been reached and that the collection of materials had been made. A copy of the report is included in the minutes.

The question of what should be placed in the archives was raised. After some discussion it was agreed that Charles E. Lively receive all contributions and pass on their suitability for inclusion in the archives.

The report of the Resolutions Committee was presented by Samuel W. Blizzard, chairman. Other members of the committee were Nathan L. Whetten and Irwin T. Sanders. The following resolutions were adopted:

Be it resolved that the Rural Sociological Society express sincere appreciation to the staff of the Department of Sociology at the University of Maryland and to the staff of the Farm Population and Rural Life Branch, Agricultural Marketing Service, United States Department of Agriculture, for the arrangements that have been made for the 1955 annual meeting of the society.

Be it further resolved that the society thank the administrators of the University of Maryland and the staff of the Student Union for the hospitality of the university and for the facilities made available for the society's annual meeting.

Be it also resolved that the society express its gratitude to the staff of the Federal Agricultural Experiment Station at Beltsville, Maryland, for the opportunity to inspect the experimental work in progress at the station.

And be it resolved that the society convey to Dr. O. V. Wells, administrator, Agricultural Marketing Service, USDA, its appreciation for his willingness to discuss before the society the social science research within the United States Department of Agriculture.

The secretary was instructed to transmit a copy of these resolutions to the persons and institutions mentioned in them.

Margaret Hagood reported that, in the current revision of vital statistics reporting procedures, the reporting of farm residence is an optional item. Several states have elected to include it, others have elected to omit it, and still others have not decided. It was called to the attention of the members of the society that this is an appropriate time for individuals to exert what influence they might have in getting their states to include the farm residence item on the vital statistics reports.

Howard W. Beers, official representative of the society on the Council of the American Sociological Society, gave a verbal report which was received as information.

President Sewell reported on action taken in response to the action of a Joint Congressional Committee on the agricultural appropriation bill, in which rural sociology was singled out for criticism. After circularizing the Executive Committee and various leading rural sociologists in each state for suggestions, a temporary committee was appointed to give this matter consideration and take what action appeared to be appropriate. This committee consisted of the following: M. E. John, chairman, Howard Beers, O. D. Duncan, Harold Kaufman, Walter L. Slocum, Glenn Taggart, and Nathan Whetten.

M. E. John reported orally on the action of this committee, stating that they found that farm organization leaders were unaware of the action of the Joint Congressional Committee and that they were desirous of becoming better acquainted with rural sociology.

The committee does not feel that the society should be too aggressive in approaching members of Congress on this issue, but should use a great deal of discretion.

The society should not take any specific action with regard to the criticism in the report of the Joint Congressional Committee, but rather each member who is on an experiment station staff should use special care in wording titles and statements of the significance of his research in the outlines which he presents to the Office of Experiment Stations. (Paul Jehlik is now engaged in revising the headings under which the projects are classified.) The titles and outlines of research projects are important because the Federal Experiment Station depends on these outlines and the annual report in defending its position before the budgetary committees of Congress.

The report was received as information.

Because of a shortage of time, it was moved, seconded, and carried that the reports of the standing committees on research, teaching, and extension not be read but be received for inclusion in the minutes. The reports of the research and teaching committees are included. The Extension Committee did not report.

The Election Committee, consisting of E. H. Regnier, C. L. Folse, and Ward W. Bauder, reported. The following candidates

were elected to the indicated offices of the Rural Sociological Society for the coming year: president-elect, Irwin T. Sanders; vice-president, Homer L. Hitt; member of the Executive Committee, Samuel W. Blizard; member of the Teaching Committee, Douglas G. Marshall; member of the Research Committee, Paul Jehlik; member of the Extension Committee, Wayne C. Rohrer; representative to the American Sociological Society, William H. Sewell; member of the Board of Editors of *Rural Sociology*, Eugene A. Wilkening.

William H. Sewell, the retiring president, turned the meeting over to Margaret Jarman Hagood, incoming president of the society. The new president announced the action of the Executive Committee in authorizing the appointment by the president of a special Program Committee for the annual meeting. Olaf F. Larson was appointed chairman of the Program Committee for the 1956 annual meeting.

The meeting was adjourned at 5:45 p. m.

Minutes of the Meeting of the Executive Committee, August 29, 1955, University of Maryland, College Park, Maryland. William H. Sewell, Margaret J. Hagood, Irwin T. Sanders, Selz C. Mayo, Samuel W. Blizard, Nathan L. Whetten, and Ward W. Bauder were present.

Discussion of the expenses involved in making local arrangements for the annual meetings resulted in a motion to recommend to the Rural Sociological Society that a registration fee of \$1.00 be charged at the annual meetings. The motion was seconded and carried.

It was further moved, seconded, and carried that the Executive Committee recommend to the society that the treasurer make \$100 available to the Local Arrangements Committee for the 1956 meetings for use in meeting expenses of arranging for the meetings and that the treasurer be authorized to pay to the Local Arrangements Committee at Maryland the sum of \$100 to help meet the expenses of the 1955 meeting.

A. Lee Coleman, managing editor of *Rural Sociology*, came into the meeting to present a request by the Board of Editors that the society authorize the preparation and underwrite the expense (especially the nonroutine expense) of the publication of an Index of the articles in the first 20 volumes of *Rural Sociology*. No accurate estimate of the probable cost could be made at this time. It was moved, seconded,

and carried that the Executive Committee recommend that the society take the necessary action to authorize the Board of Editors to proceed with arrangements to prepare and publish an Index of articles in the first 20 volumes of *Rural Sociology*, all arrangements including financial to be subject to the approval of the Executive Committee of the society.

Discussion of the society's practice of paying the sum of \$200 to the managing editor of *Rural Sociology* in exchange for the transfer of title to the unsold copies of the journal for the current year resulted in the decision to continue this policy, established in 1952.

There was discussion of the need for a program committee for the annual meetings. According to the constitution, the Executive Committee and the chairman of the three standing committees shall constitute a program committee to arrange the program of the annual meeting. For various reasons, this arrangement has not worked very well; and in the immediate past, at least, the load of arranging programs has been borne by the president. Since the president also must prepare a presidential address, it was felt that some provision should be made to lighten this load. The Executive Committee, therefore, authorized the incoming president to appoint a special program committee to arrange the program for the 1956 meetings.

Minutes of the Meeting of the Executive Committee, August 30, 1955, University of Maryland, College Park, Maryland. Margaret J. Hagood, William H. Sewell, Irwin T. Sanders, Homer L. Hitt, Samuel W. Blizard, and Ward W. Bauder were present.

The status of the temporary committee chaired by M. E. John and referred to as the Committee on the Role of Rural Sociology was discussed and, by motion duly seconded and carried, it was decided to continue the committee under the title of Special Committee on the Development of Rural Sociology.

William H. Sewell, retiring president of the society, was added to the membership of the committee.

REPORT OF THE TEACHING COMMITTEE

At the last meeting of the Rural Sociological Society, it was recommended that the Teaching Committee plan a session at the annual meetings this year. The recommendation specified that the core content of the introductory course in rural sociol-

ogy might well be given attention and discussion.

The present Committee on Teaching wished to carry through the recommendation and to organize a session this year. However, as of early May, the committee was informed that the program had been completely filled. Although 8-9:15 a.m. became a possibility for our meeting, the committee members were reluctant to encroach upon the valuable sleeping time of our colleagues. Leland B. Tate, chairman of the Committee on Teaching, next year, then volunteered to attempt to organize a session dealing with "core content" next year.

Hence, the work of the committee this year is preparatory for next year. Two things have been—or are in the process of being—completed: First, a student opinionaire regarding the course is being prepared. This is to be administered to students at selected schools this fall and winter (1955-56). Second, a content analysis of the substantive areas treated in three current textbooks on rural sociology has been made.

The committee believes that the results of the content analysis and of the student opinionaires will be useful. The committee wishes to recommend that a session at the annual meeting next year be devoted to the teaching of rural sociology.

Respectfully submitted,

J. ALLAN BEEGLE (chairman)

REPORT OF THE RESEARCH COMMITTEE

The Committee on Research took as its assignment this year consideration of criteria which might be used to help guide the Board of Editors in selecting research articles for inclusion in *Rural Sociology*. This problem was a suggestion of the Executive Committee as communicated to the chairman by William Sewell, president of the Rural Sociological Society.

As a first step in getting at the problem, an analysis was made of articles published during 1954 (Volume XIX, Numbers 1-4, inclusive) in *Rural Sociology*. Only leading articles in each issue were selected for intensive analysis, although we are aware that a number of papers included as Research Notes undoubtedly measure up well as research articles.

Content and Treatment. We find that, of a total of 25 leading articles in the four numbers of *Rural Sociology*, two are presidential addresses and nine are either cri-

tiques or discussions of public policy. One article¹ is clearly methodological and, in our judgment, should be included in Research Notes.

Thus, only about half (13) of the leading articles in *Rural Sociology* during 1954 meet the minimum requirement of a research article—namely, that it report upon sociological experiment. By "sociological experiment," we mean exactly what O. D. Duncan means when he talks about "logico-experimental science." His presidential address, which he read at Stillwater, Oklahoma, in September 1953, contained a strong appeal for wider acceptance among rural sociologists of a logico-experimental science which, he says, "consists of (1) definition and design of a problem within the framework of logical organization, (2) factual observation devoid of all possible preconception and speculation, and (3) manipulation of the observed data in as many ways as possible to discover under what circumstances a particular relationship between phenomena occurs or exists."²

Not all of the thirteen articles which we have classified as research articles meet all these criteria of logico-experimental science, but they do approach them in varying degrees.

The committee feels that the editors have done a commendable job in striking a reasonable balance between research and non-research articles. Certainly no one can quarrel with the policy of printing presidential addresses, and what may seem to be an inordinate emphasis on critical articles is understandable when we remember that during this period the whole society was doing a great deal of self scrutiny and "soul searching" with both its self-appointed "bloodhounds" and official "ad-hocitizers." However, it is suggested that, in the future, consideration be given to including not over one non-research article per issue, thus allowing about five research articles, and raising the number of research articles published from about 13 to 20 per year.

Further analysis reveals that 8 of the 13 research articles show unequivocally that the experimenter had a clear-cut research problem in mind which he proceeded to define and design experimentally, thus satisfying Duncan's first canon. The article by Duncan and Kreitlow, entitled "Selected

Cultural Characteristics and the Acceptance of Educational Programs and Practices," sets a high standard in this regard and we cite it here as a good example of research write-up. The authors, after a brief review of previous research, pose the question for investigation and then define the principal component units of measurement. Finally, the problem is stated in the form of the null hypothesis to be tested. The methodology is clearly described and this leads to a clear understanding of the problem design and system of controls.

All research articles that were studied satisfy Duncan's second canon which involves factual observation and description. There is no doubt that much of social research is little more than pure description, and its importance cannot be gainsaid; but experimental research demands more than this. Ethnography, even though it is one step in research process, is not logico-experimental science as defined here. Furthermore, much of what we know as community surveys is nothing more than description. However, the article by Thomas F. O'Dea, entitled "The Effects of Geographical Position on Belief and Behavior in a Rural Mormon Village," is an illustration of the use of two community studies to test a well-defined hypothesis and thereby meets the requirements of logico-experimental science.

The third canon set forth by Duncan deals with the manipulation of observed data. One of the characteristics which must be present if a social science is to be built up is the presence of functional dependence in the observed facts. It is most clearly demonstrated in Engel's Law of Food and Durkheim's conclusions regarding suicide rates and social groups. In its simplest form, it may be stated as follows: Functional dependence is said to exist between phenomena when an induced change in one variable under controlled conditions results in a consistent change in a second variable which can be repeated with proximate results.

Without this characteristic of functional dependence it is impossible to predict human behavior. The purpose of all research should be to achieve adequacy in predicting human behavior from a welter of observed facts. This does not preclude the possibility that experimentation may disprove the existence of any functional relation in a given set of observed data; in fact, such a negative result may be just as significant as a positive finding

¹ Eugene A. Wilkening, "Techniques of Assessing Farm Family Values," *Rural Sociology*, XIX:1 (1954), p. 39.

² "Rural Sociology Coming of Age," *Rural Sociology*, XIX:1 (1954), p. 4.

in upsetting so-called common-sense explanations for human behavior.

Only three of the articles make no effort to manipulate the data to show relationship, and strive only to describe processes, such as commercial farming, disorganization and social change, and urban growth.

Summing up our analysis of Duncan's three canons of logico-experimental science, we may say that ten articles qualify as full-fledged research accounts while three do not.

Source of Data. The committee has taken cognizance of the source of data upon which each experiment, or research, is based. We find that 8 of the 13 research studies reported upon during 1954 are based upon primary data, i.e., upon social facts under control of the social scientist who is conducting the experiment; 5 derive their data from secondary sources, principally the census. On the basis of the above facts, the committee has little comment to make inasmuch as the balance between primary and secondary sources seems reasonable.

Areas of Study. Let us consider now the areas of study dealt with in the thirteen research articles published in 1954. Three articles reported results of experiments in the acceptance of agricultural practices and educational programs. (Two of these articles have the same senior author.) This is a practical and vital area of study justifying this emphasis.

There is one article each on (1) social participation, (2) the decision-making process, (3) horizontal (religious) mobility, and (4) the spatial or geographic factor in human behavior. But five of the articles are concerned with some aspects of technological change in rural life, specifically, with nonresident farmers, mechanization, commercial farming, social disorganization, and urbanization; the last two describe conditions in foreign lands.

The committee believes that the broad area of the effect of technological change on rural society could very well be given added emphasis, and the editorial board might wish to consider devoting one entire issue of *Rural Sociology* to it. Among the subareas which we believe to be particularly pertinent at the present time are mechanization, mass media of communication (radio, TV, etc.), rural electrification, transportation (air, surface, etc.), and modern conveniences for the home.

In addition to the research articles just reviewed, there are two critiques which deal explicitly with theoretical sociology. C. Arnold Anderson developed in his article the need for a functional theory of social class, and Alvin L. Bertrand discussed implications of a changing rural locality-group structure. Both are excellent presentations of two practical barriers to a better understanding of our society and include suggested modifications in social theory that may help surmount them. We believe that the editorial board could well encourage more articles on theory, even though it might result in an increase in the number of articles appearing in each issue.

One general comment should be made. We note in research articles that relatively few social research scientists seem to study human relations directly. Instead, there is an all-too-marked tendency to resort to indirect measures of human behavior, using economic, biological, or psychological factors. For that matter, units of action such as one person's response to another person's stimulus are just as real and permanent as how much a family spends on food or luxuries. Furthermore, there is just as much, or more, predictability in a farmer's workday schedule as there is in predicting how many babies will die this year. The problem is in hitting upon the units of action that can be observed and that have functional dependence within the field of human relations.

Exporting Rural Sociology. Knowledge of rural society on an international basis is accumulating because American rural sociologists are being recruited in ever-increasing numbers for foreign assignments as a part of our nation's technical assistance programs to underdeveloped countries.

We are beginning to learn that concepts that fit United States conditions do not have world-wide application. Take for example the American community concept which has developed out of empirical evidence. When we carry this concept with us into other societies, such as that of India, we run immediately into both semantic and sociological difficulties. "Community" is more generally understood to refer in India to tribal groups with distinct cultures of their own rather than town-country areas. Furthermore, the village, the nearest thing to a geographical community, must be analyzed without recourse to preconceptions as to what constitutes a community lest the results of the

research be colored thereby. Thus, we must learn to use the rules of logico-experimental science and to treat of things designated by names, not names by things.

Slowly but surely one sees emerging from the efforts of a large number of American rural sociologists what may become in fact an international rural sociology. It will be rooted in experimental research in action because it must prove its way by playing the role of handmaiden to action programs designed to raise the levels and standards of living of rural people.

The Research Committee is desirous of calling the attention of the entire society to the time, not far off, when textbooks in rural sociology may no longer rely almost exclusively as they do today upon research and illustration material drawn from the United States. The editorial board should begin to emphasize in journal articles results of foreign experimental research. American rural sociology has much to gain in stimulating and encouraging research in other lands, for science is always a two-way street.

Respectfully submitted,

T. WILSON LONGMORE (chairman)

REPORT OF THE COMMITTEE TO ESTABLISH
A REPOSITORY FOR THE RECORDS AND
OTHER HISTORICAL MATERIAL OF THE
RURAL SOCIOLOGICAL SOCIETY

This committee, created at the Oklahoma meeting in 1953, surveyed the field and found that several institutions met the criteria set up to determine suitability for housing the collection. Of these, several were not interested in obtaining the collection, and the choice eventually came to be between the libraries of two midwestern universities—namely, Kentucky and Missouri. Kentucky withdrew in favor of Missouri, and the committee voted unanimously to place the collection in the library of the University of Missouri where it will be housed with the Mississippi Valley Historical Collection.

Accordingly, the committee effected an agreement with the University of Missouri

library, a copy of which has been placed in the hands of the secretary of the Rural Sociological Society. This agreement provides, among other things, (1) for the housing of the collection for an indefinite period which, after five years, may be terminated by the society after six months' notice; (2) that the collection will be housed with the Western Historical Manuscript Collection, in fireproof quarters; (3) that the papers and documents shall be classified and kept available for examination by students approved by the director of the collection, and under conditions specified by him.

Photographic or typed copies of any portion of the collection will be made available at cost.

Collection has begun and a call is hereby issued for records, particularly records that predate *Rural Sociology* and records of events or activities not likely to appear in the journal or in the records of the secretary-treasurer. These could include such things as the presidents' records, programs of meetings, committee action, photographs, letters such as those in the Galpin album, etc. Contributions should be directed to Charles E. Lively rather than to the University of Missouri library.

Respectfully submitted,

LOWRY NELSON

HOWARD BEERS

CHARLES E. LIVELY (chairman)

REPORT OF THE AUDITING COMMITTEE

The Auditing Committee has examined the records of Ward W. Bauder, present treasurer, and Samuel W. Blizzard, past treasurer of the Rural Sociological Society, and found them to be correct and in order. The committee commends Doctors Bauder and Blizzard for the excellent manner in which they have discharged the responsibilities of this office during the past year.

Respectfully submitted,

ALBERT ORCUTT

JOHN R. CHRISTIANSEN

HAROLD CAPENER (chairman)

RURAL SOCIOLOGY

TREASURER'S REPORT
RURAL SOCIOLOGICAL SOCIETY

October 28, 1954

Beginning balance\$3,034.92

RECEIPTS

Membership dues..... 42.75

Total Receipts\$3,077.67

EXPENDITURES

Printing 1954 annual meeting programs (Ingals Printing Co.)..... 76.79

Funds transferred to new treasurer (Ward W. Bauder) 2,997.88

Refund (outstanding check noted in August 10, 1954, report)..... 3.00

Total Expenditures 3,077.67

Balance, October 28, 1954.....\$ 00.00

Respectfully submitted,

SAMUEL W. BLIZZARD

TREASURER'S REPORT
RURAL SOCIOLOGICAL SOCIETY

August 18, 1955

Beginning balance received from former treasurer, Samuel W. Blizzard.....\$2,997.88

RECEIPTS

Membership dues.....\$2,663.95

Back issues of *Rural Sociology* for members..... 12.25Sale of back issues of *Rural Sociology* (A. Lee Coleman) 728.08

Overpayments (Albert Orcutt)..... 2.25

Total Receipts.....\$6,404.41

EXPENDITURES

4,000 printed stamped envelopes (postmaster, Urbana, Illinois).....\$ 154.16

2,000 letterheads, 2,000 membership cards, and 3,000 membership
application and renewal cards (Meenach's) 59.102,000 invitations to membership (Publishing and Printing Department,
Oklahoma A. & M. College)..... 37.92

1,000 unprinted envelopes (Meenach's)..... 3.98

1954 back issues of *Rural Sociology* (A. Lee Coleman) 200.00

200 reprints of Constitution and Bylaws (A. Lee Coleman) 4.75

1955 subscriptions to *Rural Sociology* (A. Lee Coleman) 1,849.501954 subscriptions to *Rural Sociology* (A. Lee Coleman) 93.50Back issues of *Rural Sociology* for members (A. Lee Coleman)..... 12.25

Refunds (Albert Orcutt)..... 2.25

Total Expenditures\$2,417.41

Balance, August 18, 1955.....\$3,987.00

Respectfully submitted,

WARD W. BAUDER

CONSTITUTION OF THE RURAL SOCIOLOGICAL SOCIETY

as Revised, August, 1955

Article I. Name. This organization shall be called the Rural Sociological Society.

Article II. Objects. The objects of this society shall be to promote development of rural sociology, through research, teaching, and extension work.

Article III. Affiliation. This society shall be affiliated with the American Sociological Society.

Article IV. Members. Any person professionally employed in the field of rural sociology, or who is interested in the objects of this society, may become a member upon the vote of the executive committee and the payment of annual dues.

Article V. Officers. The officers of the society shall consist of a president, a president-elect, a vice-president, and a secretary-treasurer, whose duties shall be those usually appertaining to those offices. The president-elect of a given year will automatically become president the following year.

Article VI. Executive Committee. The executive committee shall consist of the officers, the retiring president, and one other member to be elected by the society. The executive committee shall be the governing body of the society, except insofar as the society delegates governmental functions to officers or to other committees independent of or in cooperation with the executive committee.

Article VII. Elections. The president-elect, vice-president, and one other member of the executive committee shall be elected annually by a majority of the members voting. The secretary-treasurer shall be appointed by the other members of the executive committee. A representative of the Rural Sociological Society on the council of the American Sociological Society shall be elected every third year in the same manner as the officers of the society. This representative shall be an active member of the American Sociological Society.

Article VIII. Annual Meeting. The society shall meet annually. The time and place of meeting shall be determined by the executive committee.

Article IX. Amendments. The constitution may be amended by a two-thirds vote of those present and voting at any annual meeting, provided that written notice of any proposed amendment shall be sent to the secretary by five members of the society not later than two months before the annual meeting, and shall be transmitted by the secretary to the members of the society at least two weeks before the annual meeting. Publication of a proposed amendment in the journal, *Rural Sociology*, at least two weeks before the annual meeting will be an acceptable method of transmitting notice to members of the society.

BYLAWS

Article I. Membership and Dues.

Section 1. The membership of the society shall consist of the following classes: active, student, joint, emeritus, and contributing. Each member shall be eligible to vote and to hold office, and shall be entitled to one subscription to the official journal of the society.

Section 2. An active member shall pay dues of five dollars (\$5.00) per annum.

Section 3. Undergraduate and graduate students in residence at educational institutions, who have not completed all requirements for the Ph.D. degree and who are sponsored by an active member of the society, may be admitted as student members of the society. A student member shall pay dues of two dollars and seventy-five cents (\$2.75) per annum.

Section 4. Joint membership in the active category may be taken out by a husband and wife upon payment of annual dues of six dollars and fifty cents (\$6.50). Both persons shall have the rights and privileges of membership in the society, provided that they shall together be entitled to one subscription to the society's official journal.

Section 5. Any member of the society, when retired by his institution because of having reached retirement age, may apply to become an emeritus member, provided that he has paid dues for 7 out of 10 years immediately prior to such application. The annual dues of emeritus members shall be the same as for student members.

Section 6. A contributing membership may be taken out by any person otherwise eligible for membership upon payment

annually of seven dollars (\$7.00) or more.

Article II. Standing Committees.

Section 1. There shall be three standing committees—research, teaching, and extension. Each of these committees shall be composed of three members, one to be elected each year for a term of three years in the same manner as the executive committee. The senior member of each committee shall act as its chairman. It shall be the duty of each of these committees to make inquiry as to the status and progress of that phase of rural sociology assigned to it, and to make such reports and recommendations to the society as it may see fit.

Section 2. The executive committee and the chairmen of the three standing committees shall constitute a program committee for arranging the program of the annual meeting.

Article III. Publications.

Section 1. The quarterly journal, *Rural Sociology*, shall be the official publication of the society, and its management shall be vested in a board of editors to be elected by the society. The powers of the board of editors include the right to set the rate for journal subscriptions to nonmembers of the society.

Section 2. The board of editors, *Rural Sociology*, shall consist of five elected members, one to be chosen each year for a term of five years in the same manner as the executive committee. The board shall appoint an editor-in-chief and a managing editor. If the editor-in-chief or the managing editor are appointed from among the board members, a vacancy shall be considered to exist in the board.

Section 3. Three dollars and fifty cents (\$3.50) of the dues of each active and contributing member and of each pair of joint members and two dollars and fifty cents (\$2.50) of the dues of each student and emeritus member shall be paid to the managing editor for a subscription to *Rural Sociology*.

Section 4. The board of editors of *Rural Sociology* shall submit an annual report of its receipts and expenditures and of its general policies, with a proposed budget for the ensuing year. The board of editors shall not obligate the society for expenditures in excess of its receipts

from subscriptions, advertising, and other sources.

Article IV. Elections.

At the beginning of each year the president shall appoint a nominating committee of five members. This committee shall nominate two candidates for each position and report their names to the secretary two months before the annual meeting. Not later than six weeks before the annual meeting, the secretary shall mail to each member a ballot bearing the names of the two nominees for each position, which ballot, to be valid, shall be returned to him not later than one month before the annual meeting in an envelope bearing the signature of the member. An election committee appointed by the president shall then canvass the ballots and shall report to the annual meeting the election of those who have received a majority of the ballots cast. The new officers shall assume office immediately following each annual meeting.

Article V. Vacancies.

The executive committee is empowered to fill any vacancies that may occur in the committees or among the officers of the society or among the board of editors.

Article VI. Amendments.

Amendments to these bylaws may be proposed by the executive committee or by any member of the society and shall be adopted by a majority of those present and voting at any annual meeting, provided that the amendment shall be sent to the secretary by five members of the society not later than two months before the annual meeting, and shall be transmitted by the secretary to the members of the society at least two weeks before their annual meeting. Publication of a proposed amendment in the journal, *Rural Sociology*, at least two weeks before the annual meeting will be an acceptable method of transmitting notice to members of the society.

COLLEGES AND UNIVERSITIES

Alabama Polytechnic Institute. Laurene Wallace has joined the staff to teach rural sociology, cultural anthropology, and social problems.

Allahabad Agricultural Institute. Rural sociology has now become an integral part

of the teaching, research, and extension arms of the institute under the leadership of H. S. Azariah, head of the Department of Agricultural Economics and Rural Sociology. This is the first time that any college in India has given such status to rural sociology.

Jamuna Punarnirman Pilot Extension Project, financed through a grant from the Ford Foundation, completed its third year of operation on April 30, 1955, under direction of T. A. Koshy and J. B. Chitambar. Financial responsibility for continuation of the extension project during the current year has been taken over by World Neighbors, Inc.

T. Wilson Longmore (of the University of Illinois, under a contract with the Foreign Operations Administration) is evaluating results of the extension project. In collaboration with A. P. Barnabas, Longmore has prepared a syllabus for undergraduate courses in rural sociology.

Phillips Foster, Fulbright Fellow from the University of Illinois, has completed a sociological study of an Indian village in which the extension program has been operating for three years. Upon his return to the United States he will use the material gathered at the institute for his master's thesis.

Lillian Smith and J. Lossing Buck recently lectured at the institute.

A. P. Barnabas and T. Wilson Longmore were official delegates to the First Indian Sociological Conference, which was convened at Dehra Dun, United Provinces, April 17-20, 1955.

Boston University. Herbert E. Stotts, formerly of Iliff School of Theology, Denver, Colorado, has joined the faculty of the School of Theology as professor of sociology of religion and town and country work.

Kent State University. James E. Fleming is visiting professor of sociology at Ohio State University for the academic year, 1955-56. He replaces John F. Cuber who is on leave for the year. V. Dewey Annakin, professor of sociology at Indiana State Teachers College, Terre Haute, Indiana, has been appointed visiting professor of sociology to replace Fleming.

Oscar Ritchie has resumed his teaching in the Department of Sociology, after a leave of two quarters during which he was assistant director of a study of Ohio's facilities for dealing with juvenile delinquents. The study was conducted at Ohio State University.

Thomas Laing has been appointed graduate assistant in the department.

University of Kentucky. Howard W. Beers, head of the Departments of Sociology and Rural Sociology, is on leave in Paris on a six-month assignment with the European Productivity Agency, Office of European Economic Cooperation. He will advise Western European governments on evaluation procedures for agricultural extension programs. During his absence, A. Lee Coleman will be acting head of the two departments.

Ralph Spielman is visiting lecturer in sociology this year. He has recently taught at the University of Michigan and Wellesley College. John C. Ball, who received his doctorate from Vanderbilt University during the past summer, has been appointed instructor in sociology. C. Milton Coughenour will transfer from the University of Missouri and join the staff, February 1, 1956, as associate sociologist.

Graduate assistants in sociology this year are Harold Brown, Emily Feltman, Earl Griswold, and Ross Lowes. James Young and Paul Richardson hold full-time appointments under the rural sociology research program and are working on dissertations.

C. Arnold Anderson, professor of sociology, is at the Institute of Sociology, University of Uppsala, Sweden, under a Fulbright award. Anderson spent last year at the University of Lund. James S. Brown, associate professor of rural sociology, is completing his Fulbright assignment in Bonn, Germany, and will visit several areas of Africa, the Middle East, and the Far East before returning to duty February 1, 1956. Both Anderson and Brown attended the Helsinki (Finland) meeting of the International Association of Agricultural Economists in August.

C. Paul Marsh, assistant rural sociologist, has resigned to join the staff of North Carolina State College. Paul Richardson has been appointed director of an adult education and service center being set up on the campus of the former Southern Christian Institute, Edwards, Mississippi. He begins full-time duty early in 1956.

Irwin T. Sanders, distinguished professor, is currently president of the Southern Sociological Society and president-elect of the Rural Sociological Society. After his return from Europe, July 1, he spent most of the summer doing research with the Associates for International Research, Inc.,

Cambridge, Massachusetts. Earl Griswold assisted him.

Sidney J. Kaplan has been promoted to assistant professor.

Louisiana State University. Rudolph Heberle, professor of sociology since 1938, has been designated Boyd Professor. He was also elected a fellow of the American Association for the Advancement of Science. Heberle was visiting professor at Columbia University, New York City, during the past summer session where he offered courses in Social Movements and Social Stratification.

Roland J. Pellegrin was recently promoted to associate professor of sociology.

Homer L. Hitt was named president-elect and Alvin L. Bertrand was made secretary-treasurer of the Southern Sociological Society at the 1955 annual meeting in Nashville, Tennessee. Hitt was also elected vice-president of the Rural Sociological Society at the 1955 annual meeting at the University of Maryland.

The Louisiana Commission on Higher Education has contracted with Paul H. Price, Marion B. Smith, and Roland J. Pellegrin to conduct research projects as part of that agency's study of the needs of higher education in the state. Price is to do research on the relationship of population to higher education, Smith is to analyze adult extension services in the state, and Pellegrin is to do a study on leadership.

Alvin L. Bertrand has been employed as research consultant by the Louisiana State Department of Education to assist in the evaluation of the Practical Nurse Education Program in the state. This study is supported in part by a grant from the Kellogg Foundation.

The 1956 Conference on High-Speed Computers will be held February 15-17, 1956. This conference is open to businessmen, office managers, accountants, engineers, chemists, physicists, economists, statisticians and other potential users from all sections of the country. Topics scheduled for discussion included office procedures, statistical operations, and numerical methods designed for the adaptation of problems to machine solution. Several manufacturers of computing equipment will be represented through exhibits or demonstrations of computers in operation.

The College of Notre Dame of Maryland. Margaret Mary Toole has returned to her duties as personnel director and associate professor of sociology.

Oklahoma A. & M. College. John C. Belcher, associate professor of rural sociology, resigned his position to accept an appointment at the University of Georgia, effective September 1, 1955.

Texas A. & M. College. Daniel Russell has returned to the Department of Agricultural Economics and Sociology following more than a year's absence in Haiti. His initial position in Haiti was that of rural community activities specialist of the United States of America Operations Mission to Haiti. Soon after the hurricane devastated part of the country, he was also selected as coordinator of Private Relief Activities and director of the Pilot Rehabilitation Project. Later he was appointed director of the Mission to Haiti.

During Russell's absence from the campus, Bardin H. Nelson served as chairman of the sociology section of the department. He is now engaged in part-time research on The Use of Money as a Technique in Training Children. He is also a parole officer of the Texas State Prison System.

Melvin S. Brooks, following a term as vice-president, is now president of the Texas College Classroom Teachers Association.

Robert L. Skrabanek is now dividing his time equally between teaching and population research. During the summer Dan R. Davis was an associate research economist for the Texas Transportation Institute.

State College of Washington. Paul H. Landis, who established the Department of Rural Sociology in 1936, and who has since divided his time between the rural and the general departments, has transferred full time to the general department as state professor of sociology where he will devote most of his attention to the marriage-family area. He returned to the campus in September, after a sabbatical year during which he traveled around the world studying population problems and family patterns in different cultures.

Walter L. Slocum is working on a study of the educational and occupational planning of Washington high-school seniors and of undergraduates at the State College of Washington. He is also making a study of the reasons why some students drop out of college, while others complete their college work.

Carol L. Stone has completed the field work on her study of reasons why students drop out of Whitman County high schools and is now working on a manuscript which will report the findings.

LaMar T. Empey, who has been a research assistant in the department for the past two years, has accepted a position at Brigham Young University. He has completed a study of the relationships of social class and family authority patterns of Washington high-school seniors. The study was done in partial fulfillment of requirements for the Ph.D. in sociology, which he received at the June commencement. He is collaborating with Walter L. Slocum in the preparation of a report dealing with the occupational and educational planning of high-school and college women.

G. A. Kristjanson, formerly research assistant in the Department of Rural Sociology at the University of Wisconsin, joined the staff on September 16, 1955, as acting junior rural sociologist. He will work with Murray A. Straus, Carol L. Stone, and Walter L. Slocum on a five-year study of Agricultural Extension Service methods. The project is financed in part by a grant from the W. K. Kellogg Foundation. One objective of the study is to compare intensive methods of doing extension work under the newly instituted "farm and home planning" method and the more traditional system of encouraging adoption of new scientific practices in agriculture and home economics through meetings, tours, mass communication media, and similar devices. Another objective is to compare the cost of securing adoption of recommended practices through various methods of extension teaching.

University of Wisconsin. William H. Sewell has resigned from his position as chairman of the Social Science Research Committee of the Graduate School to devote full time to teaching and research. He is dividing his teaching between the Department of Rural Sociology and the Department of Sociology and Anthropology.

CONFERENCES AND ASSOCIATIONS

Eastern Sociological Society. The 1956 annual meeting will be held on March 24 and 25, at the Hotel New Yorker in New York City.

The Executive Committee has appointed W. C. Waterman (chairman), Robert Bales, and Ely Chinoy to the Committee on Papers for this year. It is the policy of the society to encourage the presentation of papers on any subject which appears to be of interest to sociologists: analyses of empirical data, theory, methods of research, etc. Graduate students are encouraged to submit papers and participate in the pro-

gram. The papers which are accepted for presentation will be arranged, insofar as possible, by topics for sections of the program. To facilitate processing papers, contributors are asked to state the topics (family, theory, or any others) in the order in which they would prefer to have them assigned to a section. The deadline for submitting papers is January 1, 1956. Papers should be limited to about fifteen minutes of oral presentation. All papers and all correspondence in regard to papers should be addressed to the Committee on Papers, c/o W. C. Waterman, Chairman, Department of Sociology and Anthropology, Brooklyn College, Brooklyn 10, New York.

FELLOWSHIPS, AWARDS, AND GRANTS

The Population Council, Inc. The council is offering several fellowships for advanced training in the study of population at the predoctoral and postdoctoral levels. Fellowships will be available for study in American universities during the academic year 1956-57. Fellows will normally receive support for full-time work for a period of twelve months. The basic stipend of \$2,500 may be supplemented to provide for travel, maintenance of dependents, and other exceptional expenses. Somewhat larger stipends may be granted to postdoctoral than to predoctoral fellows.

Applications for the academic year 1956-57 should be received before March 1, 1956. Requests for further information and for application forms should be addressed to The Population Council, Inc., 230 Park Avenue, New York 17, New York.

Sears-Roebuck Foundation. The foundation has established a nation-wide four-year college scholarship program for outstanding students. The Sears Merit Scholarship program couples undergraduate scholarships with "cost of education" grants to the small- and medium-sized independent colleges attended by the recipients.

A total of 100 scholarships with a valuation of \$600,000 is being offered this year. The foundation anticipates adding 100 additional four-year scholarships each year thereafter. It is estimated that the average cost of each Sears scholarship will be approximately \$1,500 per year, or \$6,000 for the four years. Of the \$6,000, it is expected that about \$2,500 will go to the college as a supplemental grant and about \$3,500 to the student for tuition and other expenses.

The program is being administered by the National Merit Scholarship Corporation, Evanston, Illinois, an organization whose purpose is to devise and administer a nation-wide system of scholarships for higher education. The Merit Scholarship Corporation will handle the mechanics for selecting Sears Foundation Merit scholars through the secondary schools of the nation. This selective process anticipates that students will enter the colleges of their choice in the fall of 1956.

NEW PUBLICATIONS

Sociometry. This journal of interpersonal relations, founded by J. L. Moreno in

1937, and devoted to sociometry, group psychotherapy, role playing, sociodrama, and psychodrama, will become an official publication of the American Sociological Society, starting with the January, 1956 issue.

International. This new quarterly journal of sociometry, group psychotherapy, and psychodrama will be published in five languages—English, French, German, Spanish, and Italian. It will be edited by a staff headed by J. L. Moreno. The first issue will be published in March, 1956. It will be published by Beacon House, P. O. Box 311, Beacon, New York. The annual subscription rate will be \$4.00.

1956 MEETING OF THE RURAL SOCIOLOGICAL SOCIETY EAST LANSING, MICHIGAN, SEPTEMBER 5-6, 1956

Call for Papers and Program Suggestions

The Program Committee asks that each person who wishes to have a paper considered for the program prepare an abstract of not over 500 words, indicating title, problem, data, and (if available now) results and conclusions. Send two copies of the abstract by March 1, 1956 to the chairman:

Olaf F. Larson
133 Warren Hall
Cornell University
Ithaca, New York

Program sections tentatively planned are on Social Values and Technical Cooperation Programs, What Rural Sociologists Want from the 1960 Census, Regional Population Studies, Introductory Rural Sociology Courses in Land-Grant and Teacher Training Institutions, and Sociological Studies in Extension Evaluation. Papers on any subject will be considered. Selections will be made by the committee and section chairman by April 1. Suggestions concerning the program will be welcomed.

RURAL SOCIOLOGICAL SOCIETY MEMBERSHIP, 1955

(To October 20, 1955)

Total: 588

United States (533)

ALABAMA (8)

Andrews, Henry L.
Caldwell, Morris G.
Dickinson, Harry E.
Edwards, V. A.
*Garren, Robert E.
Jones, Lewis W.
McMahan, C. A.
Percy, John E.

Box 797
Box 636
Howard College
Box 925
118 South Ross
Rural Life Council
Manpower R's'ch Branch, OERL
Carver Court, Moton Street

University
University
Birmingham
Tuskegee Institute
Auburn
Tuskegee Institute
Maxwell AFB
Tuskegee Institute

ARKANSAS (3)

Charlton, J. L.
Folkman, William S.
Hudson, G. T.

University of Arkansas
University of Arkansas
University of Arkansas

Fayetteville
Fayetteville
Fayetteville

CALIFORNIA (12)

Andersen, Martin P.
Carter, Gene W.
*Conine, Donald F.
Cramer, Raymond L.
Davis, Kingsley
Eisenstadt, S. N.
Green, James W.
Joy, Adena
McMillan, Robert T.

878 South Bundy Drive
1798 Scenic Avenue
444 Kelton Avenue
5981 Tam O'Shanter Lane
University of California
202 Junipero Serra Boulevard
APO 74, Box K
Giannini Hall, University of California
APO 928, MSA-STEM,
c/o Postmaster
202 Junipero Serra Boulevard
1651 Victoria Avenue
University of California

Los Angeles 49
Berkeley 9
Los Angeles 24
Fresno
Berkeley
Stanford
San Francisco
Berkeley

O'Dea, Thomas F.
Scott, Woodrow W.
Taylor, Paul S.

San Francisco
Stanford
Los Angeles 19
Berkeley 4

COLORADO (4)

Clark, Catherine R.
Greene, Shirley E.
Hodgson, James G.
*Stabler, George M.

Colorado A. and M. College
366 Gaylord Street
Box 275
Colorado A. and M. College

Fort Collins
Denver 6
Fort Collins
Fort Collins

CONNECTICUT (8)

†Brunner, Edmund deS.
Burnight, Robert G.
Fabyan, Warren W.
Fischhoff, Ephraim
Lynn, Paul R.
McKain, Walter C., Jr.
*Trask, Owen S.
Whetten, Nathan L.

R. R. 3
University of Connecticut
Teachers College of Connecticut
Box 205, Yale Station
Hartford Theological Seminary
University of Connecticut
Ripley Hill Road
University of Connecticut

Wilton
Storrs
New Britain
New Haven
Woodstock
Storrs
Coventry
Storrs

DISTRICT OF COLUMBIA (28)

Beale, Calvin L.
Beran, D. L.

1960 Biltmore Street, N.W.
FOA-Cairo, Egypt
c/o State Department Mailroom
317 Tenth Street, N.E.
7711 Old Chester Road
1201 16th Street, N.W.
1201 16th Street, N.W.
1201 16th Street, N.W.
1201 16th Street, N.W.
1201 16th Street, N.W.
Agricultural Marketing Service
Agricultural Marketing Service
2070 Belmont Road, N.W.
1751 N Street, N.W.

Washington 9

Bowles, Gladys K.
Bruce, William F.
*Clark, Lois M.
Cooper, Shirley
*Dawson, Howard A.
*Ellena, W. J.
Hagood, Margaret Jarman
Hague, Bart
Hariri, Mahmud S.
Hartman, Vladimir E.

Washington 25
Washington 2
Washington 14
Washington 6
Washington 6
Washington 6
Washington 6
Washington 25
Washington 25
Washington 9
Washington 6

*Student membership.

*Joint membership.

†Contributing membership.

IOWA (25)

Beal, George M.
 Becker, Edwin L.
 Boblen, Joe M.
 Carnes, Otis G.
 *Chandler, Charles S.
 #Dreier, William H.
 #Ferneau, Elmer F.
 #Ghormley, Hugh W., Sr.
 #Ghormley, Mary
 Graft, E. F.
 Harris, Marshall
 Hradecky, W. C.
 Jamison, William G.
 Koonka, Donald H.
 Ligutti, L. G.
 Murphy, Donald R.
 *Robinson, Robert P.
 *Rogers, Everett M.
 Rohwer, Robert A.
 Schnucker, Calvin
 Stacy, W. H.
 Wakeley, Ray E.
 Williams, Hugh J.
 *Wilson, John C.
 *Young, Lloyd

Iowa State College
 Drake University
 Iowa State College
 Iowa Wesleyan College
 Woodward State Hospital
 Iowa State Teachers College
 Iowa State Teachers College
 Box 134
 Box 134
 Iowa State College
 418 River Street
 St. Wenceslaus Church, Duncan
 University of Dubuque
 702 West Ashland Avenue
 3801 Grand Avenue
 Wallaces' Farmer and Iowa Home-
 stead, 1912 Grand Avenue
 Box 335
 325 Pammel Court
 Route 1
 University of Dubuque
 Iowa State College
 2144 Sunset Drive
 Drake University
 Friley Hall, Iowa State College
 206 Ag. Annex, Iowa State College

Ames
 Des Moines
 Ames
 Mt. Pleasant
 Woodward
 Cedar Falls
 Cedar Falls
 Union
 Union
 Ames
 Iowa City
 Britt
 Dubuque
 Indiana
 Des Moines 12
 Des Moines 5
 Collins
 Ames
 Paulina
 Dubuque
 Ames
 Ames
 Des Moines
 Ames
 Ames

KANSAS (8)

Anderson, James
 *Ekwebelem, Zak O. N.
 Gerling, Amy G.
 Hill, Randall C.
 Kling, Hailung
 Schroll, Slater Agnes
 Taylor, Lloyd
 Wolters, Father Gilbert

Bethany College
 600 North 16th Street
 University of Wichita
 Kansas State College
 Kansas Wesleyan University
 Mount St. Scholastica College
 Manhattan Bible College
 St. Benedict's College

Lindsborg
 Manhattan
 Wichita
 Manhattan
 Salina
 Atchison
 Manhattan
 Atchison

KENTUCKY (14)

Anderson, C. Arnold
 Beers, Howard W.
 Christiansen, John B.
 Coleman, A. Lee
 Gladden, James
 Hanna, C. Morton
 Hendon, Robert L.
 Mayhew, Earl
 Quarles, Mary Ann
 Ramsey, Ralph J.
 Sanders, Irwin T.
 Scudder, Richard F.
 Sutton, Willis A., Jr.
 *Yong, James N.

University of Kentucky
 130 Hamilton Park
 University of Kentucky
 University of Kentucky
 University of Kentucky
 University of Kentucky
 100 East Broadway
 Murray State College
 117 Arcadia Park
 Box 1251, Berea College
 University of Kentucky
 University of Kentucky
 Georgetown College
 University of Kentucky
 280 East High Street

Lexington
 Lexington
 Lexington
 Lexington
 Lexington
 Louisville 2
 Murray
 Lexington
 Berea
 Lexington
 Lexington
 Georgetown
 Lexington
 Lexington

LOUISIANA (15)

Bertrand, Alvin L.
 Bourgeois, Lawrence L.
 *Coates, Charles H.
 Fisher, J. W.
 Frey, Fred C.
 Garmon, W. S.
 Heberle, Rudolf
 Hitt, Homer L.
 Hyde, Roy E.
 Jones, J. H., Jr.
 Parenton, Vernon J.
 *Porter, William Henry, Jr.
 Price, Paul H.
 Thompson, Susanne
 Waddell, H. Clayton

Louisiana State University
 Loyola University
 2922 Morning Glory Avenue
 Southern University
 Louisiana State University
 4220 Seminary Place
 Louisiana State University
 Louisiana State University
 College Station
 Louisiana State University
 Louisiana State University
 Louisiana State University
 Louisiana State University
 Box 8444, University Station
 4209 Seminary Place

Baton Rouge 3
 New Orleans
 Baton Rouge
 Baton Rouge
 Baton Rouge
 New Orleans 23
 Baton Rouge 3
 Baton Rouge
 Hammond
 Baton Rouge
 Baton Rouge 3
 Baton Rouge
 Baton Rouge
 Baton Rouge
 New Orleans

MAINE (1)

Ploch, Louis A.

University of Maine

Orono

*Student membership.
 #Joint membership.

MARYLAND (13)

- Ducoff, Louis J.
 Hirsch, Robert K.
 Hoffommer, Harold
 Howes, John B.
 Melvin, Bruce L.
 Oliver, J. A.
 Reltz, Joanne W.
 Roberts, Roy L.
 Rohrer, Wayne C.
 Roth, Norman R.
 #Taeuber, Conrad F.
 #Taeuber, Irene B.
 White, James E.
- 385 Mansfield Road
 University of Maryland
 University of Maryland
 Westminster Theological Seminary
 University of Maryland
 Maryland State College
 1915 Fox Street
 4404 Bywood Lane
 University of Maryland
 University of Maryland
 4222 Sheridan Street
 4222 Sheridan Street
 106 Hodges Lane

Silver Spring
 College Park
 College Park
 Westminster
 College Park
 Princess Anne
 Hyattsville
 Bethesda 14
 College Park
 College Park
 Hyattsville
 Hyattsville
 Takoma Park 12

MASSACHUSETTS (4)

- Gross, Neal
 Stotts, Herbert E.
- *Withers, Richard E.
 Zimmerman, Carl C.
- 30 Oxford Street
 Boston University
 745 Commonwealth Avenue
 215 Herrick Road
 Harvard University
- Cambridge 38
 Boston 15
 Newton Centre 50
 Cambridge 38

MICHIGAN (23)

- Kiegle, J. Allan
 Brower, George
 Brown, Maxwell
 Bubolz, George C.
 Dice, Eugene F.
 *Dumitru, John
 Freedman, Ronald
 Gibson, Duane L.
 Hoffer, Charles R.
 Honigshelm, Paul
 Johansen, John P.
 *Kurtz, Richard A.
 Levak, Albert E.
 Loomis, Charles P.
 Miller, Paul A.
 Robinson, William McKinley
 Ryan, Bryce
 *Salcedo, Danilo V.
 Schuler, Edgar A.
 Sower, Christopher
 Taggart, Glen L.
 Thaden, John F.
 Turkel, Henry
- Michigan State College
 Michigan State Normal College
 379 East Chicago Street
 151 Stoddard Avenue
 212 W. Grand River
 812-A Maple Lane
 University of Michigan
 Michigan State College
 Michigan State College
 802 Cherry Lane, Apt. 112
 600 West College Avenue
 Michigan State College
 Michigan State College
 Michigan State College
 Michigan State College
 1414 Low Road
 Wayne University
 319 Albert Street
 Wayne University
 Michigan State College
 330 Kensington Road
 Michigan State College
 650 West Boston Boulevard
- East Lansing
 Ypsilanti
 Coldwater
 East Lansing
 East Lansing
 East Lansing
 Ann Arbor
 East Lansing
 East Lansing
 East Lansing
 Marquette
 East Lansing
 East Lansing
 East Lansing
 East Lansing
 Kalamazoo 41
 Detroit
 East Lansing
 Detroit 2
 East Lansing
 East Lansing
 East Lansing
 Detroit 2

MINNESOTA (10)

- Deininger, Marian
 Donohue, George A.
 *Fletcher, John A.
- Hynes, Emerson
 *Keiley, John D.
 Martinson, Floyd M.
 Miller, Ralph E.
 Nelson, Lowry
 Swain, William A.
 Tates, Marvin J.
- 3421 32nd Avenue South
 University of Minnesota
 Unit 360, University Village
 Como and 20th Avenues, S.E.
 St. John's University
 University of Minnesota
 Gustavus Adolphus College
 School of Agriculture
 University of Minnesota
 Macalester College
 University of Minnesota
- Minneapolis
 Minneapolis
 Minneapolis 14
 Collegeville
 St. Paul 1
 St. Peter
 St. Paul 1
 St. Paul 1
 St. Paul 5
 St. Paul 1

MISSISSIPPI (14)

- Allen, John H.
 Brewster, Edward E.
 Burrus, John N.
 Davis, Milan W.
 Dickens, Dorothy
 Fortenberry, J. W.
 Kaufman, Harold F.
 King, Morton B., Jr.
 Loftin, Marion T.
 #Pedersen, Harold A.
 #Pedersen, Mrs. Harold A.
- Mississippi Southern College
 Rust College
 Mississippi Southern College
 Okolona College
 Box 235, Mississippi State College
 Route 2, Box 121
 Box 324
 Box 473
 Box 860
 Box 751
 Box 751
- Hattiesburg
 Holly Springs
 Hattiesburg
 Hattiesburg
 Okolona
 State College
 Lorman
 State College
 University
 State College
 State College
 State College

*Student membership.
 #Joint membership.

MEMBERSHIP LIST, 1955

377

*Richardson, Paul D.
Rivers, Dorris W.
*Saunders, John Van Dyke

Mt. Beulah Christian Center
Box 886
Box 885

Edwards
State College
State College

MISSOURI (15)

*Bender, William H.
Bland, Thomas A.
*Bonwell, Mary R.
Coughenour, C. Milton
Falls, Vera
Gregory, Cecil L.
Hassinger, Edward W.
Hepple, Lawrence M.
*Holik, John S.
Lionberger, Herbert F.
Lively, Charles E.
McNamara, Robert L.
Nolte, Ernest F.
Snayder, Claude J.
*Wyrick, Louis W., Jr.

259 South Market Street
William Jewell College
University of Missouri
University of Missouri
Nat'l College for Christian Workers
University of Missouri
11 South Williams Avenue
University of Missouri
University of Missouri
University of Missouri
University of Missouri
University of Missouri
135 Bompert
1729 Chouteau Avenue
728 Gentry Place

Milan
Liberty
Columbia
Columbia
Kansas City 1
Columbia
Columbia
Columbia
Columbia
Columbia
Webster Groves 19
St. Louis 3
Columbia

MONTANA (2)

*Farris, Mae
Renne, Roland R.

Montana State College
Montana State College

Bozeman
Bozeman

NEBRASKA (3)

Anderson, A. H.
Eastman, Harold D.
Holberg, Otto G.

3330 Starr Street
Midland College
University of Nebraska

Lincoln
Fremont
Lincoln 8

NEVADA (1)

Bertrand, John R.

University of Nevada

Reno

NEW JERSEY (3)

Ambry, Edward J.
Lefes, William S.
Ranschoff, Priscilla B.

New Jersey State School of
Conservation
Cape May Court House
138 Bath Avenue

Branchville
Cape May
Long Branch

NEW MEXICO (2)

Geddes, Ezra W.
Johansen, Sigurd

University of New Mexico
Box 55

Albuquerque
State College

NEW YORK (55)

Anderson, Walfred A.
*Boek, Jean K.
*Boek, Walter E.
*Cascini, William
*Chu, Chi-Sheng

Cornell University
N. Y. State Dept. of Health
N. Y. State Dept. of Health
230 West 17th Street
Apt. 4B-417, Hudson River Hotel

Ithaca
Albany
Albany
New York 11

*Colman, Gould P.
*Connor, Ruth M.
Cummings, Gordon J.
Cyr, F. W.
Dirkes, Mrs. Robert F.

611 West 114th Street
140 Updike Road
6255 81 Street, Middle Village

New York
Ithaca
Long Island
Kings Ferry
New York 27

Duthie, Mary Eva
Ford, Mrs. Thomas J.

Columbia University
155 East 44th Street
Girl Scouts of the U.S.A.

New York 17
Ithaca

*Franklin, John S.
*Frisbee, Elwood K.
*Hardee, J. G.

Cornell University
155 East 44th Street
Girl Scouts of the U.S.A.
81 Kensington Road
108 Homer Avenue
U. S. Operations Mission Iran,
APO 205

New York 17
Bronxville 8
Comstock

Hotchkiss, Wesley A.
Infield, H. F.

287 Fourth Avenue
Van Wagner Road, RFD 3

New York
New York
Poughkeepsie

*Kaya, Esin
*Kirby, Fay
Koenig, Edward
Kraenzel, Carl F.
*Larsen, Mrs. H. T.

628 West End Avenue
102 East 22nd Street
Box 551
Near East Foundation, APO 205
31 Tallman Place

New York 24
New York 10
Ellenville
New York
Nyack

*Student membership.
#Joint membership.

- Larson, Olaf F.
Lorge, Irving
*Longest, James W.
*Marasigan, Lilia Y.
*McKenna, Frances L.
McMinn, Gerald W.
Montgomery, James E.
†Nelson, John
- *Ofslager, Norman
*Parham, Lloyd V.
Paw U., Richard
Polson, Robert A.
Ramsay, Charles E.
Randolph, H. B.
Rasmussen, Albert T.
Reeder, William W.
Rodehaver, Myra W.
Rowan, Margaret Bright
Sanford, Glenn F.
Santopolo, Frank A.
Sardo, Joseph
*Schwarzweiller, Harry K.
Senior, Clarence
†Senyk, Anna A.
- Standing, Theodore G., Sr.
Talets, Philip
*Terry, Miriam
Waterman, Willoughby C.
Whitman, Laurie B.
Williams, Robin M., Jr.
Winick, Charles
*Woodward, Mary
*Zapata, Gerardo Hernan
- Cornell University
Columbia University
Warren Hall, Cornell University
1290 Amsterdam Avenue
Rm. 434, 1290 Amsterdam Avenue
Saint Bonaventure University
R. R. 3
345 East 46th Street
Save the Children Federation, Inc.
Cornell University
96 Reid Avenue
U. N. Box 20, Grand Central Station
Cornell University
Cornell University
156 Fifth Avenue
1100 South Goodman Street
Cornell University
15 Prospect Street
427 West 117th Street
150 Fifth Avenue
Fordham University
15 Monroe Street
Cornell University
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